

WILDLIFE RESEARCH REPORT

ACTIVITIES ON WILDLIFE MANAGEMENT AREAS
AND REFUGES 1990-91

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TENNESSEE
WILDLIFE
RESOURCES
AGENCY



TWRA Technical Report No. 91-13



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SUMMARY

The Wildlife Management Area and State Refuge programs are significant programs in the overall operations of the Tennessee Wildlife Resources Agency. During 1990-91 there were two WMA's (Alvin C. York and Ernest Rice, Sr.) and three refuges (Bat Creek, Holston River, and White Lake) added to the program consisting of 2571 and 1688 acres respectively. At present there are 68 WMA's (1,288,355 acres) and 23 refuges (24,457 acres) in Tennessee totaling 1,312,812 acres.

For the year ending June 30, 1991 there were 52 full time and 7 part time positions assigned to work directly on WMA's and refuges, with 6 additional supervisory positions located in the regional offices and in the central office. The annual budget was \$3,463,223 (including forestry operation on Cheatham and Catoosa) for the 54 projects identified specifically as WMA projects with approximately \$2,943,000 actually being expended from those budgets. In addition, almost 600 mandays of time were spent on these areas by wildlife officers, biologists, and other personnel which were coded to other budgets.

The WMA budgets were under spent by almost \$520,000 (15%) with almost all of the under expenditures as a result of a freeze on the purchase of equipment. Only \$20,000 (7% of the \$320,000 budgeted for equipment) was spent. Travel was another budget area that was also significantly under spent (47%).

Program Activities

Waterfowl - A summary of waterfowl activities is included on page A9. During 1990-91, approximately 8,700 acres were planted for waterfowl and an additional 1,276 acres were burned or disked to enhance waterfowl habitat. A total of 33,031 acres were flooded during the winter months which benefited various wetland species. This in general represents an increase in acres planted and flooded compared to the 1989-90 year. Most WMA's were open with statewide seasons although some areas were open only on specified days or closed earlier than sunset. Not all reports included estimated hunters, but those that did report indicated at least 12,145 hunter trips for ducks and 9,155 trips for geese.

Raccoon and Furbearers - Very little information was reported regarding raccoon and other furbearer management on TWRA lands except hunting and trapping activities (page A10). Great strides have been made in recent years to

expand raccoon hunting on WMA's and most now allow hunting the entire length of the statewide season except where closed during big game hunts. Trapping seasons have also been expanded on many areas. Total users reported included 7,859 hunters, 853 trappers, and 798 raccoon trappers.

Small Game - Page A8 summarizes the efforts with regard to small game habitat development on WMA's. A total of 10,632 acres were manipulated in some fashion to improve habitat for small game species including 2,591 acres through force account, 2,649 acres through share crop agreements, 2,300 acres burned, and 295, 1,915, and 502 acres disked, mowed, and cleared respectively. With only a few exceptions, WMA's take advantage of the entire small game season lengths and bag limits except where closed for waterfowl and big game seasons.

Deer Program - A substantial amount of WMA manpower was spent on the deer program. A total of 5,955 acres of crops were planted which enhanced deer populations and another 4,940 acres were burned, mowed, etc., to enhance habitat. The forest management programs on Catoosa and Cheatham resulted in 1,541 acres being manipulated for deer.

Deer harvest on WMA's increased to 6,828, the second highest on record. (Note that some deer harvested on WMA's are reported with the respective counties in which they are located.) The reported harvest from WMA's represents about 5.75% of the total statewide harvest.

Turkey Program - WMA personnel reported planting 1,610 acres specifically to enhance turkeys, although turkeys benefited from several additional acres planted or manipulated for other species. Twenty-eight miles of road right-of-way and 2,421 acres were mowed, disked, etc. Personnel also spent 264 mandays trapping 125 turkeys on WMA's for restoration. Additional time was spent by area personnel on trapping activities off of their areas, however that time was reflected in other projects.

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TWRA WILDLIFE MANAGEMENT AREAS AND REFUGES

Region	Area Name	Date Est.	Ownership	WMA Acres	Refuge Acres	Total Acres
I	Anderson-Tully	1955	Private	12,493		12,493
I	Bards Creek Ref	1966	USTVA		870	870
I	Barkley	1966	USCOE	7,753		7,753
I	Bean Switch Ref	1991	TWRA		554	554
I	Big Sandy	1956	USTVA	1,562		1,562
I	Camden	1956	USTVA	3,562		3,562
I	Chickasaw	1954	TDF	14,187		14,187
I	Ernest Rice, Sr.	1990	TWRA	2,121		2,121
I	Gooch	1961	TWRA	6,458	200	6,658
I	Harmons Creek	1956	USTVA	408		408
I	Hop-In Ref	1991	TWRA		682	682
I	Lauderdale Ref	1987	TWRA		652	652
I	LBL	1968	USTVA	63,000		63,000
I	Lick Creek	1962	USTVA	61		61
I	Maness Ref	1991	TWRA		2,312	2,312
I	Moss Island (1)	1959	TWRA	3,357		3,357
I	Natchez Trace	1957	TDF	35,140		35,140
I	New Hope	1962	USTVA	92		92
I	N.B. Forrest	1975	TDEC	3,318		3,318
I	Obion River	1991	TWRA	8,288		8,288
I	Perryville	1956	USTVA	149		149
I	Reelfoot Lake	1951	TWRA	24,000		24,000
I	Reelfoot Ref	1965	TWRA		1,000	1,000
I	Shelby Forest	1964	TDOC	12,000		12,000
I	Tigrett	1958	TWRA	4,110		4,110
I	West Sandy	1956	USTVA	3,638		3,638
I	White Lake Ref	1990	TWRA		938	938
I	White Oak	1985	TWRA	5,744		5,744
Region I Total				211,441	7,208	218,649
II	AEDC	1954	USAF	37,181		37,181
II	Bordeaux-Heron Ref	1979	TWRA		6	6
II	Camp Boxwell Ref	1955	Private		1,133	1,133
II	Cedar Hill Swamp	1988	TWRA	166		166
II	Cheatham	1939	TWRA	19,888		19,888
II	Cheatham Res.	1961	USCOE	4,102	450	4,552
II	Cumberland Spgs	1975	Private	7,008		7,008
II	Dyson Ditch Ref	1966	USCOE		450	450
II	Eagle Creek (5)	1989	Private	22,000		22,000
II	E.A.C. Ref	1969	TWRA		207	207
II	Flintville	1976	TWRA	750		750
II	F.O.P. Refuge	1971	Private		38	38
II	Gallatin Steam Plt	1974	USTVA	1,607		1,607
II	Haley-Jaqueth	1991	TWRA	232		232
II	Hermitage	1972	TDEC	787		787
II	Laurel Hill	1959	TWRA	15,939		15,939
II	Lock 5 Refuge	1956	USCOE		880	880
II	MTSU	1982	MTSU	302		302
II	Normandy	1977	USTVA	2,127		2,127
II	Old Hickory Res	1959	USCOE	3,478		3,478
II	Pardue Pond Ref	1959	USCOE		450	450
II	Percy Priest (2)	1968	USCOE	14,000		14,000
II	Woods Res. Ref	1961	USDOD		1,900	1,900
Region II Total				129,567	5,514	135,081

TWRA WILDLIFE MANAGEMENT AREAS AND REFUGES

Region	Area Name	Date Est.	Ownership	WMA Acres	Refuge Acres	Total Acres
III	Alpine Mtn	1981	Private	1,709		1,709
III	Alvin C. York	1990	TDE	450		450
III	Amnicola Ref	1986	USTVA		50	50
III	Catoosa	1942	TWRA	77,190		77,190
III	Chickamauga (4)	1988	USTVA	12,574		12,574
III	Cordell Hull	1988	USCOE	25,000		25,000
III	Cordell Hull Ref	1973	USCOE		600	600
III	Fall Creek Falls	1952	TDEC	9,423		9,423
III	Hiwassee Refuge	1955	USTVA		6,813	6,813
III	Kingston Refuge	1962	USTVA		431	431
III	Mt. Roosevelt	1979	TWRA	9,388		9,388
III	Oak Ridge	1989	USDOE	35,282		35,282
III	Paint Rock Refuge	1955	USTVA		1,076	1,076
III	Pickett	1954	TDF	9,886		9,886
III	Prentice Cooper	1947	TDF	26,266		26,266
III	Standing Stone	1954	TDEC	8,007		8,007
III	Volunteer AAP	1975	USDOD	7,340		7,340
III	Watts Bar (4)	1988	USTVA	5,480		5,480
Region III Total				227,995	8,970	236,965
IV	Bat Creek Ref	1990	USTVA		625	625
IV	Big Ridge	1954	TDEC	0		0
IV	Buffalo Spgs	1981	TWRA	333		333
IV	Cherokee For. (3)	1971	USFS	613,037		613,037
IV	Chilhowee Mtn	1982	Private	6,000		6,000
IV	Chuck Swan	1952	TDF	24,887		24,887
IV	Cove Creek	1954		2,555		2,555
IV	Cove Mtn	1987	Private	1,220		1,220
IV	Doe Mtn.	1979	Private	14,846		14,846
IV	Eastern State	1974	TF&A	371		371
IV	Henderson Isl Ref	1958	USTVA		686	686
IV	Heron Island Ref	1980			50	50
IV	Holston River Ref	1990	USTVA		125	125
IV	Nolichucky	1973	USTVA	2,127		2,127
IV	Norris	1954				
IV	Phipps Bend Ref	1988	USTVA		1,200	1,200
IV	Rankin	1983	USTVA	1,600		1,600
IV	Royal Blue	1991	TWRA	46,376		46,376
IV	Tellico Lake	1985	USTVA	6,000		6,000
IV	Tellico Lake Ref	1985	USTVA		79	79
Region IV Total				719,352	2,765	722,117
Statewide Total				1,288,355	24,457	1,312,812

- (1) Changed to a WMA in 1977
- (2) Unit II added in 1977
- (3) Several units proclaimed at various times from 1937 to the present
- (4) First proclaimed as individual units at various times from 1955
- (5) First proclaimed as Champion in 1976

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BUDGET EXPENDITURES FOR THE 1990-1991 FISCAL YEAR - WMA's & REFUGES

PROJ #	PROJECT NAME	PERSONNEL		SALARIES		BENEFITS		TRAVEL		PRINT		UTIL		COMMON MAINT		PROF-SERV		SUPPLIES		RENTALS		VEHICULAR		EQUIP		OTHER		TOTAL		AMOUNT SPENT	DIFF		
		FULL	PART	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT				
1410	Anderson Tully O & M		*	24,828		5,986		3,927		0		1,878		771		552		60		13,119		300		1,489		650		0		57,433	50,660	6,773	
1420	Shelby Forest O & M		2	30,934		6,499		3,902		0		1,878		771		552		60		13,119		300		1,489		650		0		58,593	60,154	(1,561)	
1430	Natchez Trace O & M		3	48,791		12,992		5,139		0		2,440		17		146		66		6,820		94		2,191		995		0		89,648	79,492	10,156	
1431	Equip & Bldg Imp Total			600		175		0		0		0		0		0		1		0		0		1,987		0		0		4,505	2,762	1,743	
				49,391		13,167		5,139		0		2,440		17		146		67		6,820		94		4,178		995		0		94,153	82,254	11,899	
1440	Kentucky Lake/Barkley O & M		3	83,611		21,956		14,422		6		1,082		760		266		387		16,594		288		9,896		1,895		4		178,721	151,166	27,555	
1441	Bldg & Crop Imp Total			67		10		0		0		0		0		0		168		2,922		0		0		0		0		16,500	3,167	13,333	
				83,678		21,966		14,422		6		1,082		760		266		555		19,516		288		9,896		1,895		4		195,221	154,333	40,888	
1450	Lauderdale Ref O & M		2	28,902		6,673		3,678		0		397		0		1,202		497		1,882		170		3,641		0		0		42,862	47,041	(4,179)	
1460	White Oak O & M		1	20,932		5,503		2,402		0		1,732		678		65		255		7,373		0		942		0		0		33,352	39,883	(6,531)	
1470	Reelfoot/Watshed Lks O & M		4	93,756		23,677		13,177		51		10,123		2,873		34,572		4,718		26,162		379		8,860		1,890		32,506		239,355	252,744	(13,389)	
1480	Obion/Forked Deer O & M		2	54,214		10,654		8,186		1,060		201		760		853		452		1,923		166		10,914		0		0		89,868	89,383	485	
1490	Wetlands			2,356		498		1,697		0		0		0		0		(1,409)		0		0		399		0		0		29,406	3,542	25,864	
1491	Wetlands Total			12,774		2,925		510		23		0		0		0		10,703		2,413		0		0		730		0		76,574	46,496	30,078	
			1	15,130		3,423		2,208		23		0		0		0		9,294		2,413		0		399		730		0		105,980	33,620	72,360	
Region I Total			18	4	549,965		136,104		78,808		1,169		21,375		6,746		38,068		25,832		111,408		13,314		55,200		9,780		32,513		1,312,171	1,080,280	231,891
2410	Cheatham Units O & M			50,975		11,756		4,358		0		3,244		920		351		236		6,769		94		475		3,600		0		90,624	82,777	7,847	
2416	Planting			18,086		4,075		1,005		0		0		0		0		29		3,802		0		2,680		0		7		34,031	29,683	4,348	
2417	Water Mgmt			5,938		1,314		640		0		0		0		0		12		136		0		1,556		0		0		14,311	9,597	4,714	
7419	Forestry Total			28,120		4,434		5,313		26		240		8,681		3,770		20,466		2,413		0		22		0		0		98,846	71,073	27,773	
			4	1	103,119		21,579		11,316		26		3,244		1,161		9,032		4,047		31,172		94		4,733		3,600		7		237,812	193,129	44,683
2430	Old Hickory O & M			43,271		9,783		6,127		2		2,757		928		561		315		3,183		0		3,242		0		30		77,272	70,200	7,072	
2436	Planting			11,960		2,729		2,077		0		0		12		179		38		16,928		0		4,191		0		0		49,636	38,113	11,523	
2437	Water Mgmt			6,374		1,492		600		0		0		0		90		25		336		0		6,249		0		0		17,853	15,165	2,688	
	Total		3	1	61,604		14,004		8,803		2		2,757		939		830		379		20,446		0		13,682		0		30		144,561	123,477	21,084
2440	Laurel Hill O & M			44,837		10,777		2,058		0		3,655		255		267		195		4,125		0		1,611		0		0		62,661	67,780	(5,119)	
2446	Planting			10,051		1,982		601		0		0		0		430		51		5,410		0		2,680		900		0		35,588	22,106	13,482	
	Total		2	54,889		12,759		2,660		0		3,655		255		697		246		9,535		0		4,291		900		0		98,249	89,885	8,364	
2450	Percy Priest O & M			22,983		6,140		3,069		0		3,532		841		253		202		4,967		0		350		0		0		52,185	42,336	9,849	
2456	Planting			21,682		5,162		621		0		0		0		5,040		5,044		10,691		0		8,838		850		0		52,825	57,938	(5,113)	
	Total		2	44,675		11,302		3,690		0		3,532		841		5,293		5,246		15,658		0		9,188		850		0		105,010	100,274	4,736	
2460	AEDC O & M			48,978		9,692		6,723		0		3,427		1,038		243		245		2,524		427		997		0		0		80,708	74,294	6,414	
2466	Planting			7,372		1,476		1,545		0		0		0		10		73		4,765		0		16,284		0		0		35,480	31,526	3,954	
	Total		3	56,351		11,168		8,268		0		3,427		1,038		253		318		7,289		427		17,281		850		0		116,188	105,820	10,368	
2470	Hermitage O & M		*	1,991		453		93		0		0		0		0		120		0		0		0		0		0		5,273	2,657	2,616	
Region II Total			14	2	322,629		71,264		34,830		28		16,614		4,232		16,105		10,356		84,100		521		49,176		5,350		37		707,093	615,243	91,850

BUDGET EXPENDITURES FOR THE 1990-1991 FISCAL YEAR - WMA's & REFUGES

PROJ #	PROJECT NAME	PERSONNEL FULL PART	SALARIES	BENEFITS	TRAVEL	PRINT	UTIL	COMMON	MAINT	PROF SERV	SUPPLIES	RENTALS	VEHICLE	EQUIP	OTHER	TOTAL BUDGET	AMOUNT SPENT	DIFF
			SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT	SPENT			
3410	Catoosa O & M		145,397	33,444	11,459	0	2,338	64	60	458	59,164	3,630	(3,712)	2,163	0	353,905	254,464	99,441
3411	Other Cr Bridge Imp		17	2	0	0	0	0	0	1	231	0	0	0	0	20,000	251	19,749
3416	Planting		13,917	2,523	2,478	0	0	0	0	219	4,029	0	7,190	2,409	0	49,806	32,764	17,042
3418	Vegetation Manip		10,533	2,172	1,770	0	0	0	0	19	113	0	306	0	0	26,333	14,913	11,420
7429	Forestry		73,985	16,617	8,323	0	484	1,215	4,248	14,176	14,493	0	3,679	3,000	0	201,298	140,220	61,078
	Total	11	243,849	54,758	24,030	0	2,822	1,279	4,308	14,873	78,029	3,630	7,462	7,572	0	651,342	442,612	208,730
3420	Prentice Cooper O & M		36,026	6,664	2,411	0	2,845	0	0	42	5,085	39	284	0	8	56,085	53,503	2,582
3426	Planting		3,648	691	240	0	0	0	0	10	323	0	557	0	0	11,187	5,468	5,718
3428	Vegetation Mgmt		1,265	263	240	0	0	0	0	5	25	0	21	0	0	5,007	1,819	3,188
	Total	2	40,939	7,618	2,892	0	2,845	0	0	57	5,433	39	862	0	6	72,279	60,791	11,488
3430	Chick-Watts Bar O & M		93,600	20,329	6,121	0	2,514	283	463	6,677	25,670	1,394	7,248	0	42	133,656	164,340	(30,684)
3436	Planting		11,792	2,464	2,132	0	0	0	0	34	29,783	0	4,732	0	0	91,953	50,937	41,016
3437	Water Mgmt		3,374	931	512	0	0	0	0	8	193	0	20	0	0	11,142	5,036	6,104
3438	Vegetation Mgmt		1,127	330	256	0	0	0	0	8	0	0	28	0	0	7,646	1,749	5,897
	Total	5	109,893	24,054	9,021	0	2,514	283	463	6,727	55,645	1,394	12,027	0	42	244,397	222,064	22,333
3440	Oak Ridge O & M	1	28,911	6,676	6,219	0	0	54	0	13	591	0	58	0	0	52,387	42,521	9,866
3450	Volunteer AAP		4,861	1,170	771	0	0	0	0	2,708	0	0	0	0	0	10,491	9,510	981
3460	Amnicola Marsh		822	150	197	0	0	0	3,198	210	7	0	0	899	0	9,470	5,493	3,987
3470	Cordell Hull O & M	1	25,285	4,631	1,821	0	0	46	0	287	2,142	0	249	0	0	39,597	34,482	5,135
	Region III Total	20	454,561	99,058	44,951	0	6,280	1,662	7,969	24,876	141,847	5,062	20,659	8,471	48	1,079,963	817,444	262,519
4410	North Cherokee		5,658	1,202	1,572	16	0	0	0	75,168	733	10,000	10	0	6	115,785	94,364	21,421
4420	Chuck Swan	3	70,689	17,715	5,060	0	3,271	809	802	128	16,883	75	4,958	0	0	143,745	120,392	23,353
4430	Misc Reg IV	1	46,008	11,647	6,681	0	1,838	276	3,101	9,923	9,795	0	4,122	595	10	85,398	93,798	(8,400)
4431	Phipps Bend		599	143	200	0	0	0	0	6	1,279	0	6	0	0	1,200	2,234	(1,034)
4440	South Cherokee	*	41,212	9,552	6,361	0	1,852	659	14	41	3,886	300	675	0	0	65,432	64,551	881
4450	Tellico Lake	3	39,807	9,780	6,864	0	1,472	683	556	104	6,839	0	2,446	0	0	102,860	88,560	34,300
	Region IV Total	7	203,974	50,039	26,737	16	8,234	2,437	4,474	85,370	39,415	10,375	12,216	595	16	514,420	443,898	70,522
1400	Administration		23,830	3,648	3,042	6	0	0	0	26	840	0	0	0	0	31,309	31,493	(184)
1402	Reg I - SE	1	36,117	7,429	6,371	221	0	54	0	22	847	0	0	0	0	43,565	51,061	(7,496)
2400	Reg I - NW	1	29,615	6,783	3,246	0	330	6,831	1,835	5,314	6,963	5,397	0	0	0	85,097	66,313	18,784
3400	Reg II	1	27,575	5,997	3,952	0	0	12	0	20	1,267	0	63	0	0	31,370	38,896	(7,516)
4400	Reg III	1	22,281	4,731	610	0	0	148	0	9	615	0	54	0	0	18,527	28,448	(9,921)
7400	Forestry	1	27,687	5,134	3,875	245	0	746	0	1,034	1,593	0	0	0	184	35,062	40,467	(5,405)
	Total	6	167,205	33,722	21,096	471	330	7,791	1,835	6,495	12,095	5,397	118	0	184	244,930	256,668	(11,738)
	STATEWIDE TOTAL	65	1,698,333	390,187	206,422	1,684	54,832	22,870	66,451	152,859	388,864	34,670	137,368	24,196	32,798	3,858,577	3,213,534	645,043
	balance		14,083	3,739	249,692	1,147	(6,713)	3,570	(39,354)	34,749	74,649	14,123	14,812	289,344	(32,798)		645,043	
	Percent of budget spent		99	99	45	59	114	86	235	81	84	71	90	8	ERR		83	

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ACTIVITIES ON WMA'S 1990-91 (mandays)

WMA	ENFORCE- MENT	DATA COLLECT	ADM. & COORD	HAB DEVELOP	PROP MAINT	RESTOR- ATION	EDUCA- TION	INFORMA- TION	TOTAL
Regionwide - I	0.0	15.5	82.9	4.7	0.0	0.0	3.4	0.0	106.5
Anderson Tully	11.6	53.2	21.3	44.3	42.4	5.4	1.9	0.4	180.6
Chickasaw	2.2	0.0	5.3	3.5	0.4	0.0	0.0	1.7	13.1
Gooch	21.5	13.3	116.1	42.0	262.3	1.0	14.9	0.0	471.1
Barkley	12.6	8.8	2.5	5.5	75.1	0.0	0.0	0.0	104.6
Big Sandy	10.1	10.0	2.4	38.9	52.3	0.0	0.0	0.0	113.7
Camden - I	13.0	18.5	2.7	74.5	13.5	0.0	0.0	0.0	122.2
Camden - II	0.8	9.0	0.0	17.9	2.9	0.0	0.0	0.0	30.5
Harmons Creek	7.5	13.2	1.7	151.0	65.2	0.0	0.0	0.0	238.7
Kentucky Lake	30.3	159.2	141.4	40.9	89.3	0.0	37.5	2.3	500.8
Lauderdale Ref.	4.1	12.6	13.7	63.8	245.3	0.0	0.0	10.1	349.6
LBL	39.0	28.5	1.5	6.8	0.0	58.7	4.7	0.0	139.3
Lick Creek	0.4	28.5	0.0	8.7	1.0	0.0	0.0	0.0	38.6
Moss Island	3.5	4.3	12.4	7.9	14.6	4.9	0.0	0.3	47.9
Mitigation Lands	0.0	1.2	10.3	0.0	0.0	0.0	0.0	0.0	11.5
New Hope	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Perryville	0.0	0.0	0.8	1.3	0.0	0.0	0.0	0.0	2.1
Reelfoot	169.4	731.7	259.0	169.7	323.1	4.5	47.6	3.9	1,708.9
Rice Sr.	3.0	3.7	1.9	0.0	14.7	1.0	0.0	0.0	24.3
Shelby Forest	51.3	79.0	49.8	107.4	135.7	18.0	15.3	7.4	463.9
Tigrett	3.6	99.7	71.7	30.1	1.3	0.0	0.0	2.9	209.4
West Sandy	21.9	12.9	3.1	61.2	15.9	0.0	0.0	0.0	114.9
White Oak	15.0	48.6	55.8	61.4	35.1	5.3	4.9	1.5	227.6
Regionwide - II	0.0	2.1	27.7	1.0	0.0	0.0	20.5	0.0	51.3
AEDC	103.2	129.8	119.3	113.4	191.2	13.2	26.7	0.0	696.8
Cedar Hill Swamp	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Cheatham	25.7	65.8	42.4	301.2	360.9	0.0	17.5	0.9	814.3
Cheatham Res	20.1	12.4	8.6	161.7	51.4	0.0	1.0	0.0	255.1
Cumberland Spgs	27.3	2.7	0.5	5.1	13.2	0.0	0.0	0.0	48.7
Eagle Creek	10.9	6.5	0.8	4.1	15.7	0.0	0.0	0.0	38.0
Gallatin St Pit	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Hermitage	1.7	5.8	0.0	4.1	0.6	0.0	0.0	1.4	13.4
Laurel Hill	38.9	82.5	32.9	92.3	267.7	0.0	14.0	0.0	528.3
MTSU	0.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.2
Old Hickory	19.7	70.8	144.6	346.9	321.7	1.1	1.3	2.9	909.0
Percy Priest	19.7	23.5	85.3	152.4	218.4	0.1	20.5	23.5	543.4
Regionwide - III	0.0	0.0	1.8	0.0	0.7	0.0	3.2	0.0	5.7
Alpine Mtn	4.1	0.6	0.9	1.3	0.0	0.0	0.0	0.0	7.0
Alvin C. York	0.0	0.0	1.7	0.0	37.1	0.0	0.5	0.0	39.3
Amnicola Ref	0.0	0.1	2.5	3.3	1.0	0.0	0.0	0.0	6.9
Catoosa	189.3	449.2	184.0	811.4	1,622.9	188.3	13.3	109.2	3,567.7
Cherokee - III	255.8	27.1	7.5	19.6	0.0	33.3	0.0	0.0	343.3
Chickamauga	36.6	32.7	27.8	274.7	711.6	0.0	12.1	1.0	1,096.5
Cordell Hull	23.1	28.5	69.5	122.7	8.9	1.7	7.3	37.7	299.5
Fall Creek Falls	2.5	3.3	6.5	0.0	0.0	0.0	1.5	0.3	14.0
Mt. Roosevelt	0.3	0.0	0.4	20.7	1.2	0.0	0.0	0.0	22.5
Oak Ridge	70.6	121.0	77.0	7.0	13.1	24.4	9.4	0.3	322.7
Pickett	6.2	1.5	0.0	0.7	2.0	0.0	0.0	0.0	10.4
Prentice Cooper	49.7	91.1	59.4	31.4	110.7	0.0	1.0	0.0	343.3
Standing Stone	5.3	5.1	3.0	0.7	0.0	0.0	0.0	0.0	14.0
Volunteer AAP	27.6	53.7	3.3	2.4	1.0	7.0	0.0	0.0	95.0
Watts Bar	4.6	75.2	8.0	235.4	198.4	0.0	0.0	0.0	521.6
Regionwide - IV	0.0	2.3	0.7	0.0	0.0	0.0	0.0	0.0	3.0
Cherokee - IV	734.4	252.7	90.0	214.7	24.5	101.7	1.1	10.2	1,429.3
Chilhowee Mtn	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Chuck Swan	165.0	82.7	46.2	143.3	180.0	83.9	18.0	1.6	720.7
Cove Creek	8.7	0.0	0.5	12.2	3.5	0.0	0.0	0.0	24.9
Doe Mtn	1.5	0.0	0.0	0.0	3.6	0.0	0.0	0.0	5.0
Eastern State	0.2	2.0	2.3	21.3	10.3	0.0	0.0	0.0	36.1
Gulf (in Cherokee)	0.0	0.0	1.1	0.0	5.7	0.0	0.0	0.0	6.9
John Sevier	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	3.6
Nolichucky	0.0	6.1	0.8	5.6	1.2	0.0	0.0	0.0	13.7
Phipps Bend Ref.	2.0	16.5	4.8	0.0	20.1	0.0	0.0	0.0	43.4
Rankin	0.0	0.0	0.5	5.3	2.1	0.0	0.0	0.0	7.9
Royal Blue	0.0	4.6	5.0	0.3	3.9	0.0	0.0	0.0	13.8
Tellico Lake	11.2	21.5	79.1	194.9	7.3	1.3	6.2	0.8	322.3
Statewide	0.0	9.9	295.9	0.0	0.0	0.0	12.9	1.7	320.5
TOTAL	2,273.5	2,976.9	2,189.2	4,205.4	5,758.8	549.5	313.0	219.9	18,486.2

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**WMA SMALL GAME
HABITAT MANAGEMENT
(1990-91)**

WMA	FORCE ACCOUNT (ACRES)					AGRIC. LEASE			TOTAL LEFT FOR WILD	ACRES BURNED	ACRES DISKED	ACRES MOWED	ACRES CLEARED	ACRES REFOR- ESTED	ACRES DOVE FIELDS	WMA SEASON LENGTH (STATEWIDE SEASON LENGTH)						
	GRAIN	ANN LESP	SHRUB LESP	CLO- VER	GRASS/ LEGUME	TOTAL FORCE ACCT	AG LEASE REMAIN	AG LEASE HRVSTD								(161) SQR	(60) DOVE	(113) QUAIL	(113) RABBIT	(141) GROUSE	(65) WOOD COCK	(107) SNIPES
Anderson Tully	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	144	58	94	94	n/a	50	94
Kentucky L./Bark	75	0	0	12	0	87	2.0	14.0	89.0	48.0	2.0	93.0	0.0	0.0	*	129	60	113	113	n/a	65	107
Lauderdale	12	0	0	0	0	12	0.0	0.0	12.0	0.0	5.0	75.0	0.0	0.0	*	0	0	0	0	n/a	0	0
Natchez Trace	40	0	7	0	140	187	0.0	0.0	187.0	47.0	88.0	20.0	147.0	0.0	*	159	60	113	113	n/a	65	107
Obion/F.Deer	0	0	0	0	0	0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	0.0	*	159	60	113	113	n/a	65	107
Reelfoot	20	0	15	0	492	527	121.5	775.5	648.5	287.0	0.0	0.0	335.0	0.0	*	157	60	109	109	n/a	61	103
Shelby Forest	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	63	27	38	38	n/a	38	38
White Oak	70	50	16	0	0	136	0.0	0.0	136.0	10.0	5.0	165.0	0.0	0.0	*	129	60	109	109	n/a	65	107
AEDC	108	32	0	0	0	140	31.0	312.3	171.0	0.0	4.0	0.0	0.0	0.0	*	129	45	101	101	n/a	51	101
Cheatham	66	10	0	0	0	76	0.0	0.0	76.0	18.0	30.0	65.0	0.0	0.0	*	135	52	102	102	n/a	54	96
Cheatham Res.	17	0	0	0	0	17	75.0	150.0	92.0	165.0	0.0	45.0	0.0	0.0	*	148	54	99	99	n/a	51	93
Cumb. Springs	7	7	0	0	0	14	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	*	142	51	106	106	n/a	58	100
Eagle Creek	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	135	51	102	102	n/a	56	98
Hermitage	0	0	0	0	0	0	42.0	238.0	42.0	0.0	0.0	0.0	0.0	0.0	*	0	16	113	113	n/a	65	107
Laurel Hill	123	60	0	0	0	183	18.0	67.0	201.0	60.0	100.0	180.0	0.0	0.0	*	161	30	44	42	n/a	12	44
Old Hickory	13	0	0	0	0	13	19.4	209.0	32.4	16.0	2.0	5.0	0.0	0.0	*	161	60	113	113	n/a	65	107
Percy Priest	99	101	0	0	0	200	39.5	130.5	239.5	250.0	19.5	45.0	20.0	0.0	*	161	60	113	113	n/a	65	107
Catoosa	8	0	0	0	117	125	0.0	0.0	125.0	200.0	0.0	687.0	0.0	0.0	*	130	60	69	69	91	47	63
Chick./Watts Bar	100	25	0	0	0	125	0.0	0.0	125.0	0.0	0.0	0.0	0.0	0.0	*	161	60	113	113	138	65	107
Cordell Hull	15	185	0	0	0	200	94.4	226.1	294.4	650.0	0.0	0.0	0.0	0.0	*	161	60	113	113	138	65	107
Oak Ridge	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0	0	0	0	0	0	0
Prentice Cooper	43	43	0	0	0	86	0.0	0.0	86.0	0.0	0.0	200.0	0.0	0.0	*	107	32	102	113	74	54	96
Cherok/Tell/Tap	21	0	0	0	506	527	0.0	0.0	527.0	444.0	0.0	36.0	0.0	20.0	*	107	60	113	102	141	65	107
Chuck Swan	69	35	0	0	60	164	0.0	0.0	164.0	50.0	0.0	250.0	0.0	0.0	*	161	60	97	97	141	49	91
Tellico Lake	18	8	1	0	0	27	0.0	59.0	27.0	10.0	0.0	5.0	0.0	0.0	*	36	60	14	31	31	31	31
Misc.Reg4 WMAs	105	0	0	0	0	105	5.0	20.0	110.0	45.0	0.0	0.0	0.0	0.0	*							
TOTAL	1029	556	39	12	1315	2851	447.8	2201.4	2300.0	2300.0	295.5	1915.0	502.0	20.0								

*This statistic was not monitored in 1990-91.

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WATERFOWL HABITAT MANAGEMENT

1990-91

WMA	ACRES PLANTED			ACRES BURNED/ DISKED ETC.	ACRES FLOODED					PERM WATER	DAYS HUNTED	EST. HUNTERS	EST. HARVEST
	FORCE ACCOUNT	AG LEASE REMAIN	AG LEASE HRVSTD	TOTAL CROPPED	BLH/ GTR	SCRUB/ SHRUB	MOIST SOIL	AG CROPS	TOTAL FLOODED				
Anderson Tully	0	0	0	0	11,800			0	11,800		30	1,100	
Gooch	0	0	500	500	80	1,000	1,000	0	2,000		30	1,500	
Ky/Barkley Lakes	376	253	1,047	1,676	50	3,250	1,000	430	5,104	700	30	*	1,600
Lauderdale Ref.	0	328	385	713	75		53	410	463				
Moss Island	0	0		0									
Reelfoot	39	263	245	547	287			107	442	15,000	30	3,500	
Rice Sr.	0	0		0				0	3,000		30		200
Shelby Forest													
Tigrett	0	0		0				0	1,800		30	1,000	
White Lake Refuge	0	50	350	400				400	650				
White Oak	63	0	0	63				64	4,180		22	130	
AEDC	25	16	40	81	45	40		0	40		22	310	1,225
Cheatham Res	143	113	200	456				182	482		17	500	
Old Hickory	191	57	586	834	30	15		155	170		30	1,200	
Percy Priest	72	26	14	112	229			0	0				
Chick/Watts Bar	1,035	327	854	2,216	480			327	387		30	2,500	
Cordell Hull	15	349	668	1,032				0	0		30	300	1,500
Misc. WMA's	25	5	20	50				7	13				
Phipps Bend Ref.	0	0		0				0	0				
Tellco Lake	15	46	140	201		5		67	92		30	25	
TOTAL	1,999	1,833	5,049	8,881	1,276	13,210	2,300	2,149	21,323	15,700			

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RACCOON AND FURBEARER PROJECTS 1990-91

WMA	RACCOON HUNTING (DAYS)	Est. HUNTERS	Est. Kill	RACCOON TRAPPING (DAYS)	Est. RACCOON TRAPPERS	Est. Take	TRAPPING	TRAPPERS	POP SURVEY MANDAYS
Anderson Tully	102	1219		91	20		91	20	
Gooch	102	300		91	10		91	10	
Kentucky L./Barkley	71	50		53			53		3
Lauderdale	0	0		0	0		0	0	
Natchez Trace	102	1800		80	25		80	25	
Moss Island	102	300		91	10		91	10	
Reelfoot	30	300		91	273		91	273	
Ernest Rice	102	50		91	10		91	10	
Shelby Forest	43	1500		0	0		0	0	2
Tigrett	102	100		91	30		91	30	
White Lake	0	0		0	0		0	0	
White Oak	80	25		57	1		57	1	1
AEDC	55	230	190	25			87		
Cheatham	31	100		0	0		32		
Cheatham Res.	84			19			79		
Cumb. Springs	95	30		0	0		0		
Eagle Creek	91	20		0	0		0		
Hermitage	0	0		0	0		0		
Laurel Hill	12	325		0	0		31	0	7
Old Hickory	102	10		19					
Percy Priest - Unit I	0	0		0	0		0	0	
Percy Priest - Unit II	102	200		31			91		
Catoosa	25	400		16	15		16	15	
Cherokee/Ocoee	35			15			55		
Chick./Watts Barr.	102	675		31	25		91	25	
Cordell Hull	102	150		31			91	50	
Oak Ridge	0	0		0	0		0	0	
Prentice Cooper	8	75		4			10	5	
Cherokee/North	49			0	0		91		
Cherokee/Tapoco	15			15			55		
Cherokee/Tellico	18			15			55		
Chuck Swan	12		142	0	0		21		12
Tellico Lake	49			0	0		0		
Misc.Reg4 WMAs									1
Buffalo Springs	49			0	0		91		
Cove Creek	49			0	0		0	0	
Cove Mountain	49			0	0		0	0	
Chilhowee Mountain	49			0	0		0	0	
Doe Mountain	49			0	0		0	0	
Eastern State	49			0	0		0	0	
Henderson Island	0	0		0	0		0	0	
John Sevier	0	0		0	0		0	0	
Jackson Island	0	0		0	0		0	0	
Nolichucky	0	0		0	0		0	0	
Rankin	49			0	0		91		

The statewide raccoon hunting season in West and Middle Tennessee Units was 109 days (Nov 2 - Feb 11).
The raccoon season in the East Tennessee Unit was 49 days (Nov 2 - Dec 20).

The raccoon trapping season in the West Tennessee Unit was 91 days (Nov 16 - Feb 15).
The raccoon trapping season in the Middle Tennessee Unit was 31 days (Dec 1 - Dec 31).
There was no raccoon trapping season in the East Tennessee Unit.

Chuck Swan WMA required trapper registration and checkout.

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DEER HABITAT & MONITORING ACTIVITIES
(1990-91)

AREA	AGRIC. OPERATIONS				VEGETATION MANAGEMENT					FOREST MANAGEMENT OPEN-					HAB SURVEYS		DATA COLLECTION		
	FORCE ACCT TOTAL	LEASES			BURNED	MOWED	DISKED	OTHER	TOTAL	HARV	REGEN	INGS	BURNED	TOTAL	MAST	BROWSE	CHECK STA	APC	MODELS
		HARV	REMAIN	TOTAL															
Anderson - Tully	0	0	0	0					0					0	2		12		
Shelby Forest WMA	28	0	0	0					0						0	2		10	
Natchez Trace WMA	178	0	0	0	140	60	75		275					0	6		40		
K. K. Lake/Barkley	6	0	0	0					0					0	2		8		
White Oak WMA	8	0	0	0					0					0	1				
C. M. Gooch WMA	0	0	0	0					0					0	2				
Moss Island WMA	0	160	3	163					0					0	2		2		
Reelfoot WMA	70	776	22	798		92	42		134					0	2		2		
TOTAL REG I	290	936	25	961	140	152	117	0	409	0	0	0	0	0	19	2	74	0	0
AEDC WMA	103	404	76	480		260		235	495					0	3		90		
Cheatham Res	65	150	35	185		165	45		210					0	1		2		
Cheatham WMA	96	0	0	0	18	65	30		113	221	288	18	0	527	2		88		
Cumberland Spgs	0	0	0	0					0					0			7		
Eagle Creek WMA	0	0	0	0					0					0			8		
Laurel Hill WMA	129	136	45	181	60	180	100		340					0	2		38		1
Old Hickory WMA	100	753	47	800	15				15					0			14		
Percy Priest WMA	0	0	0	0					0					0			3		
TOTAL REG II	493	1443	203	1646	78	685	175	235	1173	221	288	18	0	527	8	0	250	0	1
Catoosa WMA	341	109	88	197	200	687	114		1001	195	396	13	410	1014	6		224	9	
Chick/Watts Bar	0	0	0	0	55				55					0			10		
Cordell Hull WMA	15	845	353	1198	650				650					0	1				
Oak Ridge WMA	0	0	0	0					0					0	1		16	1	1
Prentice Cooper	114	0	0	0	200				200					0	2		42		
TOTAL REG III	470	954	441	1395	905	887	114	0	1906	195	396	13	410	1014	10	0	292	10	1
Cherokee (North)	152	0	0	0	630		14		644					0					
Chuck Swan WMA	144	200	0	200	50	250		5	305					0	2		57		
Misc. Reg IV WMA's	90	61	54	115	59				59					0			8		
Cherokee (South)	0	0	0	0				444	444					0	6	14	44		
Tellico Lake WMA	0	0	0	0					0					0			6		
TOTAL REG IV	386	261	54	315	50	939	14	449	1452	0	0	0	0	0	8	14	115	0	0
GRAND TOTAL	1639	3593	722	4316	1173	2663	420	684	4940	416	684	31	410	1541	44	16	731	10	2

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WILDLIFE MANAGEMENT AREAS DEER HARVEST – BY YEAR

AREA	1949	1955	1960	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
AEDC				57	66	88	117	231	392	225	266	627	618	677	606	755	810	618	713	661	653	744	629	491	594	818	580	800	785	784
Anderson-Tully			10	29	27	36	19	22	31	43	54	11	16	8	17	19	16	5	27	40	46	80	99	103	139	212	211	216	196	94
Andrew Johnson			40	73	32	57	35	35	22	38	8	49	52	36	58															
Big Ridge																	17	1												
Blythe Ferry															44	10	2	2	14	17	28	57	44	15	15	17	40	25	30	46
Carter Mountain													159	157	202	407	402													
Catoosa	168	130	316	804	445	355	651	674	674	268	272	238	319	229	518	386	424	409	372	333	415	385	229	378	394	514	507	661	521	765
Cheatham	20	105	89	121	139	91	191	452	452	243	176	190	190	299	334	470	378	261	154	180	194	269	318	299	454	428	296	296	378	54
Chickasaw NWR																														
Chuck Swan	980	329	384	470	515	538	238	1158	523	474	273	326	326	559	554	461	153	237	348	385	594	766	529	529	803	857	623	697	622	802
Cove Creek														12	16	14	9	16	7	13	19	18	21	27	14	42	34	48	34	39
Cumb. Spgs														20	38	78	72	133	92	107	120	166	119	121	85	121	156	120	125	76
Eagle Creek																														
Fall Creek Falls																														
Gallatin St Pit	11	24	28	39	36	13	17	---	---	---	CLOSED				5	2	1	16	12	13	8	7	6	4	9	2	15	12	25	
Gooch																														
Hatchie NWR																														
Henderson Is.																														
Holston AAP																														
Kingston Ref																														
Laurel Fork	9	6	37	27	41	13	41	25	52	34	35	39	30	41																
Laurel Hill																														
LBL																														
Milan AAP																														
Moss Island																														
N B Forrest																														
Natchez Trace																														
Oak Ridge	12	56	85	91	98	182	341	183	231	594	560	307	767	426	310	312	369	411	562	665	574	620	628	577	426	388	317	300		
Ocoee	38	116	128	86	89	82	66	41	60	114	110	50	111	55	115															
Phipps Bend																														
Prentice Cooper	11	148	63	94	166	117	42	47	49	63	69	97	53	104	193	98	79	136	128	113	102	119	161	181	163	131	167	127	235	
Reelfoot																														
Reelfoot NWR																														
Shelby Forest	62	81	43	89	73	47	76	68	26	93	38	92	93	93	165	144	166	102	144	115	73	83	32	89	58	72	82	85	103	85
Tackett Creek																														
Tellico	75	302	197	529	480	429	236	66	50	CLSD	184	72	181	280	396	359														
Tennessee NWR																														
Thiefneck Is.																														
Unicoi																														
Volunteer AAP	23	46	145	143	133	56	67	251	95	61	98	152	76	79	136															
White Oak																														
TOTALS	113	1752	1289	1906	2599	2314	1830	1930	3580	1859	2212	2566	4288	3761	5018	5263	4485	4079	4126	3870	4848	5217	4832	5562	6148	7206	6061	6800	6257	6828

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TURKEY HABITAT DEVELOPMENT ON WMA'S
1990-91

AREA	TOTAL ACRES MANIPULATED SPECIFICALLY FOR TURKEYS												
	CROPS			FIELDS					ROADS		FOREST MANAGEMENT		
	PLAN- TED	HARV- ESTED	CROPS LEFT	BURNED	MOWED	DISKED	OTHER	TOTAL	MOWED	GRADED	HARV- ESTED	REGEN- ERATED	ACRES OPENINGS
ANDERSON-TULLY	25		25		50	25		75		50			
SHELBY FOREST	44	0	44		35			35	24				
NATCHEZ TRACE	150	0	150	140	60	50		250					
WHITE OAK	63	0	63	5	8			13					
MOSS ISLAND	0			0	20	20		40					
ERNEST RICE SR	40	39	1	0	0	0		0					
REELFOOT WMA	16	0	16	0	69	25		94				22	
TOTAL REG. I	338	39	299	145	242	120	0	507	24	50	0	22	
AEDC	318	131	103		260			260					
CHEATHAM WMA	20	0	20	18	65	30		113					12
LAUREL HILL	257	121	136	60	180	100		340					
TOTAL REG. II	595	252	259	78	505	130	0	713	0	0	0	0	12
CATOOSA	438	9	429	200	687	114		1001					
OAK RIDGE								0					
PRENTICE COOPER	120	0	120		200			200	4				
TOTAL REG. III	558	9	549	200	887	114	0	1201	4	0	0	0	0
CHEROKEE								0					
CHUCK SWAN	119	0	119					0					
TOTAL REG. IV	119	0	119	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	1610	300	1226	423	1634	364	0	2421	28	50	0	22	12

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TURKEYS HARVEST AND DATA COLLECTION ON WMA'S
1990-91

AREA	DATA COLLECTION					RESTORATION	
	SUMMER BROOD SURVEY	CHECK STA. HARVEST SURVEY	HUNT DAYS	MANDAYS HUNTED	TURKEY HARV- ESTED	MAN- DAYS	TURKEYS TRAPPED
ANDERSON-TULLY	3	24	44	1433	72	15	0
SHELBY FOREST	3	14	16	1111	47	16	15
NATCHEZ TRACE	6	0	14	353	21	7	18
WHITE OAK	2	0	37	NE	5	NA	NA
MOSS ISLAND	3	6	3	22	9	NE	2
ERNEST RICE SR	2	3	3	14	4	NA	NA
REELFOOT WMA	2	8	3	67	3	27	0
TOTAL REG. I	21	55	120	3000	161	65	35
AEDC	5	35	9	200	21	26	7
CHEATHAM WMA	3	NA	NA	NA	NA	NA	NA
LAUREL HILL	1	26	12	215	17	2	0
TOTAL REG. II	9	61	21	415	38	28	7
CATOOSA	3	162	18	1655	55	156	62
OAK RIDGE	10	NA	NA	NA	NA	15	21
PRENTICE COOPER	2	24	12	57	1	NA	NA
TOTAL REG. III	15	186	30	1712	56	171	83
CHEROKEE			37	NE			
CHUCK SWAN	2	12	12	222	22	NE	0
TOTAL REG. IV	2	12	49	222	22	0	0
GRAND TOTAL	47	314	220	5349	277	264	125

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ANDERSON TULLEY OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Anderson Tully is located near the Mississippi River in the Mississippi flood plain in West Tennessee. It is within the Region I administrative unit.

There are 7 oxbow lakes on this unit that are filled with water by Mississippi river flooding.

County	Acres	Acres of Inholdings
Lauderdale	11,800	450

1.2. Staffing

Administrative support is provided by the Region I office and various central office divisions.

1.2.1. Management Area Staff

Title	Number of Full Time	Number of Part Time
Manager II	1	0
Technician I	1*	1 (30.6 days)
Vandergriff Activated to Desert Storm		

1.2.2. Region/Division Support Staff

Title	Number of Full Time	Responsibility
Manager III	1	WMA Supervisor
Wildlife Officer	1	Lauderdale Co.
Wildlife Officer II	1	Regional Area 11
Wildlife Enf. Sup.	1	Regional Area 11
Biologist II	2	Regional Region I
Biologist III	4	Statewide

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation will address the following problems and Strategies of the Agencies Strategic Plan.

Shortage of dense turkey populations for economical trapping and transplanting operations. To address the problem Anderson Tully WMA will be managed to provide optimum healthy wild turkey populations for trapping and hunting opportunity. 22 food plots are seeded to wheat to provide green browse, bugging areas, nesting sites, and trapping sites for turkeys.

2.1.1 Force Account

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Wheat	Turkey	0	25	25	0

2.1.2. Agricultural Leases

There are not any agricultural leases on Anderson Tully.

2.2. Vegetation Management

The objective of vegetation management addresses the following Problem and Strategies identified in the Agency's Strategic Plan:

Shortage of dense turkey population for economical trapping and transplanting operations.

Manage WMAs to provide optimum healthy wild turkey population for trapping and hunting opportunity. Turkeys utilize and need small openings or clearings for part of their annual cycle. Mowing roadsides and trails as well as small openings will enhance the same for both adult and young birds.

Primary Species	Acres Burned	Acres Mowed	Acres Disked
Turkey	0	50	25

*16 trapping sites mowed.

2.2.1. Linear Opening Management

Primary Species	Activity	Miles
Turkey	Grading road*	50
Turkey	Grading log dumps*	

*Grading roads and log dumps makes dusting sites for young and old turkey.

2.3. Forest Management

Anderson Tully Co. has a full time Forester for this unit (11,800 acres). No active forest management by TWRA.

2.4. Water Level Management

This objective addresses Problem VI, Strategy II of the Agency's Strategic Plan (Turkey).

The Mississippi river is very close and beavers continue to move into oxbows and ditches and cause timber loss if water levels are not lowered in the timber. Although the Anderson Tully Co. has part time employees to control beaver and protect timber. TWRA personnel assist in beaver dam removal by hand tools and explosives.

Opening ditches removing beaver dam removing beaver.

2.4.1. Flooding

There is not a flooding operation on the WMA. However, natural flooding of 11,800 acres of hardwood timber by the Mississippi river occurs on average one out of every four years (three floods in 90-91).

3. PROPERTY DEVELOPMENT AND MAINTENANCE

This unit is located between (State) Highway 87 and 19 with county roads within area.

3.1. Access Management

The objective of the access management operation is to provide the best possible access to the WMA. (Access maintenance is limited to dirt trails, 1 camping area, 2 boat ramps and Cold Creek levee. The county maintains public roads through the area.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
0	60 mi. dirt		\$3,800.00

3.1.2. Construction---none

3.2. Buildings and Grounds

3.2.1. Maintenance

Type	Cost
Office	\$100.00
Shop	
Storage	
Grounds	
campsite	200.00

3.2.2. Construction--none

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
50 miles	0	\$910.00

3.4. Equipment

The equipment assigned to this project are 1 farm tractor, 1 gooseneck trailer, harrow, disk, rotary cutter, blade for road maintenance, 2 ATV's, and an assortment of smaller tools and appliances.

3.4.1. Maintenance Cost

Diesel fuel & repairs	\$407.14
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3.4.2. Purchase of Equipment---none

3.5. Water Control System

3.5.1. Levees (Cold Creek)

Linear Feet	Type of Maintenance & cost	Construction & cost
450	Routine \$150.00 bushhog and inspect	0

3.5.2. Control Structures---none

3.6. Other

Levee will be repaired after flood water, boat ramp will be cleaned.

4. DATA COLLECTION

This activity addresses Problem III, Strategy 1, of the Agency's Strategic Plan for Turkeys. Harvest data, hunter utilization and production surveys will provide needed data to assist in management and hunter use decisions. Brood or population surveys are conducted over a 4 month period and harvest/hunter use data is obtained at the checking station during Spring turkey hunts. Habitat quality, age class, weights, general health, antler measurements and reproductive data for deer are collected primarily at the checking station on the WMA.

4.1. Checking Station Operation (by species)

Species	Man-days
Turkey	24
Deer	12

4.2. Habitat Surveys

Type	Man-days
Mast survey	2

4.3. Population Surveys

Type	Man-days
Brood survey	continuous - 4 mo.
bag check	continuous - 7 mo.
modeling deer	1

4.4. Other Data Collection (type and amount)

Raccoon Scent line	2
Boat Transect	2

5. ADMINISTRATION AND COORDINATION

Activities include coordination and administration activities consisting of management planning, personnel management, coordination with the Anderson Tully Co., meetings within the Agency as well as outside the Agency with USFWS, Anderson Tully and private landowners adjacent to the WMA, bimonthly reports, purchasing supplies, property maint. and inventory, site inspection, hunt recommendations and budget prep. and management.

6. EDUCATION

6.1. Professional Development

Law Enforcement training	40 hrs.
Firearm training	2 days
Area Mgr. annual meeting	5 days
Area Mgt. Meetings (Regional)	10 days

6.2. Hunter Education

Firearm - Game mgt. (Courses given and days)	20 days
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6.3. CENTS Education---None

7. INFORMATION

Provided information regarding hunting and fishing dates and beaver and coyote to A.S.C.S. and S.C.S.

8. RESTORATION

Type	No. Trapped	Release Site County
Turkey	0	

15 days spent feeding, site prep. and setting of net but flooding from Miss. River prevented any further efforts.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent*
	Enforcement	43	20
	Data Collection	40	40
	Admin. & Coordination	63	44.5
	Habitat Development	40	40
	Property Main. & Dev.	20	20
	Restoration	15	15
	Education	5	2
	Information	15	10
Total		241	191.5

10. HUNTING SUMMARY

This activity primarily addresses Problem IX, Strategy 3 of the Agency's Strategic Plan for Turkey and Deer Problem VIII, Strategy 2.

Quality turkey hunting on public lands in West Tenn. is in high demand. The bag limit for turkeys is structured to allow two additional birds to be harvested on WMA's in addition to the statewide bag limit. Anderson Tully provides, in addition to the maximum number of hunt days in Reg. I, the best opportunity to harvest bonus birds of any WMA. (Avg. one bird harvested per 171 acres of available habitat in the 1991 season).

Additionally deer hunting on public lands in the Miss. River floodplain is in high demand. Anderson Tully WMA offers the largest contiguous block of bottomland hardwood forest in West Tn. available for public hunting. The area is also in high demand for small game and furbearer hunting. The deer season on A.T. is more restrictive than the statewide season to allow utilization of the area by small game hunters (squirrel and swamp rabbits) on a few weekends during the statewide season. Waterfowl and raccoon hunting remains open with the statewide season to take advantage of excellent raccoon populations and above average waterfowl hunting if the Miss. River floods during the season.

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Turkey	44	no quota	1,433	72
Boar-Deer(A)E.S	33	n/quota	est. 370	21
Boar-Deer(Muz)	7	n/quota	est.1050	36
Boar-Deer(G)B.O	14	n/quota	est.1050	63
Boar-Deer(G)E.S	2	250	110	76
TOTAL	56	N/A	2,580	196

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length	Estimated Total Hunters
Duck	30	30	1100
Squirrel	144	160	3631
Rabbit	94	110	200
Quail	94	110	0
Raccoon/Opossum	101	101	1219
Trapping	91	91	20
Woodcock	50	64	10

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1410-01	\$23,846.00	\$24,491.80
1410-02	5,733.00	5,960.00
1410-03	15,204.00	3,926.00
1410.04	0.00	0.00
1410.05	0.00	0.00
1410.06	125.00	50.31
1410.07	0.00	0.00
1410.08	0.00	18.15
1410.09	4,700.00	3,849.66
1410.10	12,175.00	11,533.90
1410.11	3,200.00	407.14
1410.12	0.00	0.00
1410.13	0.00	0.00
1410.14	0.00	0.00
1410.16	2,650.00	0.00
1410.17	0.00	0.00
1410.18	0.00	0.00
1410.19	0.00	0.00
1410.20	0.00	0.00
Total	\$57,433.00	\$50,238.48

12. LAND ACQUISITION/LEASES

A-T WMA from A-T Lumber Company located in Lauderdale County 11,800 ac. cost \$11,000.00 lease.

13. GENERAL COMMENTS AND DISCUSSION

The purpose of this project is to manage Anderson Tully WMA to provide at least 20 turkeys annually for restoration and at least 1,500 mandays of turkey hunting with a harvest of 75 birds. Additionally 1500 mandays of deer hunting for at least 700 hunters with a harvest of 200 deer is projected. Small game and waterfowl hunting will be maximized at levels compatible with turkey and deer hunting.

Variance within the project budget was lower than the 10% tolerance level. The primary reason for this variance was the result of delivery of a farm disk after the FY ended. Funding for this disk was encumbered but was not subtracted for FY 90-91 budget (\$2,650.00). Additionally only 13% of the budgeted amount for budget item 11 was needed leaving \$2,792.86 unspent. Only 82% of the 09 budget was utilized because anticipated gravel could not be delivered because of floodwater.

Variance in the project mandays was lower than the 10% tolerance level. Two primary reasons are responsible for difference. Because of the activation of wildlife technician to operation Desert Storm. 29.2 days scheduled were not realized. The other reason for the variance was the difference between scheduled law enforcement mandays and days actually worked. 21 days were either not worked or not coded to the project.

14. OFFICIALS

Willis Wheeler, Wildlife Mgr.
A-T Wildlife Management Area
2730 Curve-Central Rd.
Ripley, Tn. 38063

Harold Hurst, Region I Manager
TWRA
P.O. Box 55
225 Martin Luther King Dr.
Jackson, TN. 38301

Jack Colwick, Lands Mgmt Sup.
TWRA
P.O. Box 55
225 Dr. Martin Luther King Dr.
Jackson, TN. 38301

Gary T. Myers, Executive Director
TWRA
P.O. Box 40747
Nashville, Tn. 37204

SHELBY FOREST WMA OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Meeman Shelby Forest State Park and WMA is a 12,000 acre natural recreational area located along the Mississippi River 15 miles north of Memphis within the Region I administrative unit.

The area consists of Mississippi River bluff and Alluvial flood plains. The majority of the area consists of bottomland tree species. There is approximately 35 acres of cropland within the entire unit.

<u>COUNTY</u>	<u>ACRES</u>	<u>ACRES OF INHOLDINGS</u>
Shelby	12,000	800

1.2. Staffing

Administrative support is provided by the Region I Office and various central office divisions.

1.2.1 Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager I	1	
Technician I	1	

1.2.2. Region/Division Support Staff (optional - to be used for meeting requirements of lease agreement reporting.)

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	WMA Supervisor
Wildlife Officer	3	Shelby County
Wildlife Officer II	1	Area 12 Region I
Wildlife Enf. Sup.	1	Area 12 Region I
Biologist II	2	Regional
Biologist III	4	Statewide

2. HABITAT DEVELOPMENT

2.1 Agricultural Operation

The management objective of the agriculture operation is primarily to address problem deer problem II, Strategy 5, and Turkey problem 2, Strategy II.

To address Problem II Strategy 2, of the Turkey Strategic Plan, 35 acres of small grains were planted to provide food for wild turkey and deer in times when hard mast was minimal for optimum healthy populations. All crops planted were left as food plots.

2.1.1 Force Account

Crop	Primary Species	Acres	Acres	Total	Income
	Planted for	Harvested	Remaining	Acres	
Germ Millet	Turkey	0	8	8	
Corn	Turkey and Deer	0	4	4	
Jap. Millet	Turkey	0	8	8	
Buckwheat	Turkey and Deer	0	8	8	
Peas	Deer	0	2	2	
Winter Wheat	Turkey and Deer	0	16	16	
Total			46	46	

2.1.2 Agricultural Leases

There are no agricultural leases on Shelby Forest WMA due to minimal crop acreage.

2.2 Vegetation Management

The objective of vegetation management is to primarily address Turkey Problem II, Strategy II.

In early spring all fields were mowed in strips. The strips left unmowed provide nesting areas for wild turkeys as well as cover for developing turkey poults. The strips that are mowed provide feeding areas and runs for developing turkey poults.

12 miles of roadsides were mowed twice annually to provide edge for wildlife and access for hunters.

Primary Species	Acres Mowed
Turkey	20

2.2.1 Linear Opening Management---N/A

2.3 Forest Management

Meeman-Shelby Forest State Park is a designated natural area. Trees may not be cut nor openings cleared. Existing openings are maintained by pushing trees back every other year.

2.4 Water Level management

The management objective will primarily address Duck Problem I, Strategy 3 and Turkey Problem II, Strategy II.

Water level management on Shelby Forest WMA consists of preventing spring and summer inundation of bottomland trees. To facilitate this management 65 beavers were removed from problem areas. Beaver dams were removed or opened in Spring and Summer. Culverts which allow drainage were kept free of debris.

Beaver dams are closed or allowed to be rebuilt in the fall to provide wintering habitat for waterfowl.

Explosive cost 900.00

2.4.1 Flooding

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1 Access Management

12 miles of gravel roads were graded whenever necessary to prevent gravel loss. 335 tons of gravel were added to existing roads. One road needs to be reopened to allow more direct access to hunting area.

3.1.1 Maintenance

Gravel for road maintenance \$3317.00.

3.1.2 Construction

There were no new roads constructed this year. Two new gates were erected at a cost of \$500.

3.2 Buildings and Grounds

Grounds were mowed bimonthly during Spring and Summer.

3.2.1 Maintenance

There was no major maintenance needed this year.

Expenditures were carried out as needed on office storage and grounds and was funded from budget item 09. No exact cost for each could be determined from budget printout.

<u>Type</u>	<u>Cost</u>
Office	*
Storage	*
Grounds	*

3.2.2 Construction

There were no new buildings constructed.

3.3 Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
34 miles	0	24 miles \$200

3.4 Equipment

The equipment assigned to this project includes: 1986-7610 Ford Tractor and implements, 1988 - AMT 600 John Deer utility vehicle, Chainsaw, weedeater, push type mower, and smaller support items.

3.4.1 Maintenance Cost - \$551.76

3.4.2 Purchase of Equipment

7' three point hitch rotary mower (Big Bee) \$1,683.00.

3.4.3 Vehicle Operations - 1452.04

3.5 Water Control System---None

4. DATA COLLECTION

The objective of the data collection operation is to continue data collection concerning harvest, habitat quality, hunter usage, population levels and health status of primarily turkey and deer as identified in the Agency's Strategic plan. Turkey Problem III, Strategy I, Problem IV, Strategy 2 and Deer Problem III - Strategy 3, Problem VIII - Strategy 2.

Collect data from population surveys, hunter game bag surveys, checking station operations, mast surveys, research assistance etc. to determine the health and status of deer and wild turkey. The health and status of wild turkey on the area determine the number of turkey to be trapped and relocated for restoration as well as the number to be harvested from the area. A viable wild turkey population will be maintained for restoration and hunting opportunities.

4.1 Checking Station Operation (by species)

Species	Mandays
Deer	10
Turkey	14
Squirrel	2

4.2 Habitat Surveys

Type	Mandays
Mast Survey	2

4.3 Population Surveys

Type	Mandays
Brood Survey	3
Raccoon Scent Post	2
Bag Check	10
Modeling	1

4.4 Other Data Collection---none

5. ADMINISTRATION AND COORDINATION

The administration of Shelby Forest concerns the purchasing of supplies, seed and fertilizer for planting food plots for wild turkey and deer. Supervision of one wildlife technician is also involved. Planning of all operation and maintenance is administrative.

Coordination of beaver damage control, water level management, forest management etc. is made with Department of Conservation Parks division.

6. EDUCATION

6.1 Professional Development

Type	Man-Days	Personnel
Law Enforcement	7	Wildlife Manager I
Explosive Training	2	Wildlife Manager I

6.2 Hunter Education

Courses	Days
3	7

6.3 CENTS Education---N/A

7. INFORMATION

Hunter Education information was given on one TV show.

Individual contacts - hunting information, season information, hunter education information, hunting area information, license requirement information.

Two news releases all total 4.5 days.

8. RESTORATION

Turkey Restoration	Man-days	# trapped
Trapping and Transportation	16	15
		Released SW Madison Co.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent*
	Enforcement		42
	Data Collection		70
	Administration and Coordination		51.27
	Habitat Development		100.13
	Property Maintenance and Development		114.13
	Restoration		5.93
	Education		12.60
	Information		3.27
Total			399.60

10. HUNTING SUMMARY

10.1 Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer(A) E.S.	21	None	300	1
Juv.Deer(SG)E.S.	1	None	63	4
Deer (G)B.O.	2	250	185	8
Deer (6)E.S.	6	750	584	90
	30	1000	1702	103
Turkey (Youth)	1	None	127	9
Turkey	9	525	532	25
Turkey	6	None	452	13
TOTAL	16	525	1111	47

10.2 Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Squirrel	63	129	2,500
Raccoon	43	71	1,500
Rabbit	38	109	30
Ducks	13	30	95

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1420		
1	28,480.00	30,934.07
2	5,875.00	6,498.93
3	*8,188.00	3,901.91
5	1,200.00	1,877.79
6	750.00	771.22
7	0.00	551.76
9	10,200.00	13,119.47*
11	2,300.00	1,452.04
16	1,600.00	650.00
Total	58,593.00	60,127.10

1420-09 metal pipe was ordered from this budget number but was received and paid for in the following budget. The expenditures fell well within the 10% tolerance level.

12. LAND ACQUISITION/LEASES

One inholding, the Wortham tract, 625 acres between Shelby WMA and the Mississippi River should be acquired. Owner Gordon Brent.

There are three tracts of land: East Willow Lake Farms 748 acres, West Willow Lake Farms 364 acres, and Mustin Bottoms 1905 acres located on the South side of Shelby WMA should be purchased under wetlands acquisition. The Willow Lake Farms are owned by James McAlexander estate and the Mustin Bottoms is owned by Gordon Brent.

13. GENERAL COMMENTS AND DISCUSSION

Variances in both mandays and expenditures were within tolerance levels therefore not variance statement if offered.

Shelby Forest WMA has consistently provided quality deer, raccoon, and wild turkey hunting. It has also provided 15 turkey last year and 16 turkeys this year for restoration in West Tennessee.

Since Shelby Forest WMA is only 15 miles from a major metropolitan area it would be unfortunate to disallow the public any hunting use of this area. Failure to fund this project in the future will decrease the value of the habitat and the wildlife populations.

14. OFFICIALS

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NATCHEZ TRACE WMA OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Natchez Trace is located in Western Tennessee half way between Nashville and Memphis. Interstate 40 divides the area in half.

County	Acres	Acres of Inholdings
Henderson	26,000	600
Carroll	22,000	

A small portion is located in Benton and Decatur Co. Natchez Trace has 4 lakes 2 of which are managed by TWRA. TDOC has (2) Lakes one offers 800 A. fishing/skiing and a small amount of duck hunting.

1.2. Staffing

Administrative support is provided by Region I and Central Office.

1.2.1. Management Area Staff

Title	Number of Full Time	Number of Part Time
Manager II	1	0
Technician I	2	0

1.2.2. Region/Division Support Staff

Title	Number of Full Time	Responsibility
Manager III	1	W.M.A. Supervisor
Wildlife Officer	4	Regional
Biologist	2	Regional
Biologist	4	Statewide
Wildlife Officer II	1	Regional
Wildlife Enforcement Supervisor	1	Regional

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation is primarily to address problem 8, Strategy I of the Agency's strategic plan. To help improve the deer herd on Natchez Trace high quality browse, food plots, and grain crops during late winter months are provided.

2.1.1 Force Account

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Corn	Deer and Turkey			70	
Wheat	Dove			40	
Millet	Dove			40	
Millet	Quail			40	
Lespedzas	Quail and Dove			20	
Wheat Clover	Deer and Turkey			40	
Clover,	}				
Lespedzas	}				
grasss bi color}	Quail and Rabbit			147	
Clover-	White tail Deer			68	

2.1.2. Agricultural Leases---None

2.2. Vegetation Management

This activity addresses Problem 8, Strategy 2 by providing nutritious browse for deer by mowing, burning and disking.

Primary Species	Acres Burned	Arces Mowed	Acres Disked
Deer	140	60	75
Quail	140	20	88
Turkey	140	60	50
		140	203

2.2.1. Linear Opening Management

Primary Species	Activity	Miles
Quail	Sowed with Lespedeza-Orchard	147 ac.
Rabbit	grasses clover	15 mi.

2.3. Forest Management

Coordination with T.D.F.

Assisted the Dept. of Forestry in burning 140 acres of pines.

2.4. Water Level Management---None

2.4.1. Flooding---None

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

All road and trail maintenance carried out by Dept. of Forestry.

3.2. Buildings and Grounds

The maintenance on grounds and buildings was carried out through budgeted items (09). There is no way to break this figure out of 09.

3.2.1. Maintenance

3.2.2. Construction---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
128 miles Safety zone	None	15 mi./\$900.00

3.4. Equipment

The major equipment assignment to the project is two large and one medium sized farm tractors, ATV, planter, sprayer, two rotary cutters, chain saw, cultivator, two disk harrows, farm wagon, and numerous smaller support equip items.

Minor equipment repairs were performed and funded through budget item 09. Accurate costs cannot be determined. Motorized vehicle maintenance and operation cost for: 1-115 H.P. outboard, 1 lawn mower, 2 chainsaws, 1 ATV and 3 farm tractors were covered by budget item 11.

3.4.1. Maintenance Cost

Farming Equipment---\$2,191.49

3.4.2. Purchase of Equipment

\$3,095.00 - ATV 4-Wheeler

3.5. Water Control System---None

4. DATA COLLECTION

The management objective for data collection is to maintain the data base concerning deer population levels, range and habitat conditions, general health of deer & turkey and better utilization as identified in the Agency's Strategic plan. Turkey Problem III, Strategy I, Problem IV, Strategy 2, Deer Problem II, Strategy 3.

Data collection will be primarily carried out by hunter bag checks, deer checking stations, mast survey, deer modeling, turkey brood survey and deer APC counts.

4.1. Checking Station Operation (by species)

Species	Man-days
---------	----------

Deer	40
Turkey	0

4.2. Habitat Surveys

Type	Man-days
------	----------

Mast	6
------	---

4.3. Population Surveys

Type	Man-days
------	----------

Brood (Turkey)	6
Bag check	12
Modeling	1
APC	0

5. ADMINISTRATION AND COORDINATION

Coordination of Natchez Trace W.M.A. was done as follows: 1) meetings with T.D.O.C., T.D.F. to coordinate activity concerning the, 2) operation of Natchez Trace Purchasing supplies such as seeds, fertilizer, chemicals, parts for equipment, shop supplies and getting bids on all of the above, 3) doing paper work such as SMARS, activity sheets, budgets requesting supplies and materials, coordination of paper work to get dozer work done on Natchez Trace, 4) supervising of two Wildlife Technicians, 5) supervising agricultural operations and maintenance coordination between Nashville office and Tenn. Tech. on turkey research program.

6. EDUCATION

6.1. Professional Development

Law Enforcement Training	- 40 hrs.	- 5 mandays
No-Till Work Shop		1 day
Control Burning Workshop		5 days
Regional Area Meetings		10 days

6.2. Hunter Education---None

6.3. CENTS Education---None

7. INFORMATION

Quail - Meeting with Henderson County Quail Club.

Talking with Henderson Co. and Beech River Bass Clubs on fisheries programs license increase, access ramps to Kentucky Lake.

Informing the public by telephone and word of mouth on T.W.R.A. hunting seasons and programs. Did one radio program about Natchez Trace activities and hunting seasons. Assisted in free fishing day on Cub Lake.

8. RESTORATION

107 days, by area personnel, were utilized on Region I turkey restoration project (1820) on LBL WMA. All 23 turkeys captured on LBL were released in Madison County.

Trapping and Relocation	Mandays	Trapped & Released on Site*
	7	18

*All turkeys trapped fitted with radio telemetry equip. and released on the WMA as part of an ongoing turkey research project.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent*
1430	Enforcement		45
	Biology Checking Station		38
	Admin. & Coordination		120
	Habitat Development		188
	Property Main. & Dev.		140
	Education		21
	Information		5
	Boating Enforcement		5
	Total		

10. HUNTING SUMMARY

The management objective primarily addressed Problem VIII, Strategy 2 of the Agency's Strategic plan. A quality deer management strategy was initiated in 1988 on the WMA to improve buck quality and hunter interest. After 2 years into the program, the % of 2 1/2 year old age class has improved from 14.2% in 1988 to 23.6 % in 1989. A shift to an older age class buck will mean higher buck quality. Likewise hunter applications were up from 4,649 in 1988 to 20,931 in 1990. Only the south half of the WMA is included in quality deer management. The north half is hunted on a statewide schedule.

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer-Archery	300	0	1109*	21
Deer-Gun	1290	1750		279
Deer-Muzzel loader	75	0		17
Turkey	14	N.Q.	353	21
TOTAL	1679	1750	1462	338

*North half on WMA is hunted on a statewide schedule so hunter use cannot be determined from harvest records. The harvest, however, for the north half is checked through county checking stations, and is thought to be less than the recorded harvest for the WMA.

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Squirrel	159	159	300
Quail	110	110	65
Rabbit	110	110	50
Raccoon	102	102	1800
Opossum			1800
Dove	60	60	500
Ducks	30	30	100
Trapping	80	80	25

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures	Unspent
1430	89,648.00	82,586.81	
1	42,934.00	48,791.17	
2	11,414.00	12,991.91	
3	14,710.00	5,138.90	
4	0	0	
5	3,240.00	2,439.95	
6	200.00	17.00	
7	0	146.43	
8	0	66.08	
9	10,000.00	6,619.88	
10	255.00	94.00	
11	2,900.00	2,191.49	
12	0	0	
13	0	0	
14	0	0	
16	3,995.00	4,190.00	
17	0	0	
18	0	0	
19	0	0	
20	0	0	
Total	89,648.00	82,586.81	

12. LAND ACQUISITION/LEASES

13. GENERAL COMMENTS AND DISCUSSION

Variances in both mandays and budget expenditures were within tolerance levels therefore no variance statement is offered.

The project objective is to provide 48,000 acres of prime habitat for hunting of deer, turkey and small game. 24,000 acres of the total are managed for quality deer. Increased hunter interest and usage of the area is also part of the objective for the WMA.

14. OFFICIALS

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NATCHEZ TRACE EQUIP. & BUILDING IMP.

This was an improvement project. The purpose of this project was to accomplish repairs on a 1066 IH Farm Tractor and repairs on a storage shed. Repairs were completed for less than the expected budgeted amounts on the tractor. Equipment shed repairs were not completed.

LIST OF ACCOMPLISHMENTS:

Repair to farm tractor was accomplished as follows:

- A. Repair power steering.
- B. Replace head gasket.

KENTUCKY LAKE/BARKLEY OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Kentucky Lake\Barkley WMA's are located in the riverbottoms of Kentucky Lake and Lake Barkley in the northeast portion of the Region I administrative unit.

The Kentucky Lake WMA's are leased from TVA. Three of these WMA's (Camden, Big Sandy and West Sandy) are dewatering areas that were originally built for flood and vector control. The Gin Creek Unit of Big Sandy WMA was built by TWRA for waterfowl. The Barkley WMA is leased from the U.S. Army Corp. of Engineers. It consists of lands along Lake Barkley of which a portion was designed for intensive waterfowl management.

County	Acres	Acres of Inholdings
Benton	8,799	-
Henry	5,727	-
Stewart	8,090	-

1.2. Staffing

Administrative Support is provided by the Region I Office and various central office divisions.

1.2.1. Management Area Staff

Title	Number of Full Time	Number of Part Time
Manager III	1	WMA Supervisor
Wildlife Officer	5	Benton, Henry and Stewart Co.
Wildlife Officer II	2	Areas 11 and 13
Wildlife Enf. Sup.	2	Areas 11 and 13
Biologist II	2	Regional
Biologist III	4	Statewide

1.2.2. Region/Division Support Staff

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The objective is to provide optimum wintering habitat for waterfowl by providing a variety of food sources through sharecropping as well as force account agricultural operations in order to reduce the effects of the loss of local wetlands (Ducks-Problem I, Strategy 3).

2.1.1 Force Account

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Corn	Waterfowl		4	34*	0
Milo	Waterfowl	0	117	117	0
Japanese Millet	Waterfowl	0	43	43	0
Buck wheat	Waterfowl	0	29	29	0
Wheat	Doves	0	56	56	0
Wheat	Geese	0	153	153	0
Sunflower	Doves	0	14	14	0
Corn	Deer	0	6	6	0
Corn	Quail	0	5	5	0
White Colver	Rabbits	0	12	12	0
Total		0	439	469	0

*A portion of what was planted was lost to flooding

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Corn	Waterfowl	112	2	114	0
Soybeans	Waterfowl	771	10	781	0
Wheat	Waterfowl	20	0	20	0
Millet	Waterfowl	0	50	50	0
Duckwheat	Waterfowl	64	16	80	0
Milo	Waterfowl	80	175	225	0
Soybean/ Millet Hay	Doves	14	2	16	0
Total		1061	255	1316	0

2.2. Vegetation Management

The objective is to utilize less expensive waterfowl management techniques such as mowing, burning and disking to promote moist soil plants and maintain early succession vegetation in open fields. (Ducks- Problem III, Strategy 2). These management techniques are also used to a lesser degree for quail management. Manipulation of crops for dove hunting is also accomplished by mowing.

Primary Species	Acres Burned	Acres Mowed	Acres Disked
Waterfowl	-	50	45
Quail	32	45	2
Dove	16		36
Rabbit	-	12	-

2.2.1. Linear Opening Management---N/A

2.3. Forest Management

The objective is to improve the quality and quantity of mast producing trees in order to optimize the wintering waterfowl habitat on 3250 acres of Greentree Reservoirs (Ducks-Problem I, Strategy 3). TVA has developed Forest Management Plans, for two of the units and is developing one for Camden. TWRA's role in forest management is to participate in development and review of these management plans.

Acres Under Management	Acres Clear-cut	Acres Other Agricultural Practices	Acres Planted by Species	Timber Sale Revenue
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Loblolly Pine 3.5 ac.

Sawtooth Oak 1.5 ac.

2.4. Water Level Management

The objective is to provide optimum wintering waterfowl habitat by flooding a variety of food and cover types (Duck-Problem I, Strategic 3). Beaver control and beaver dam removal was done to protect timber.

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Milo	292
Millet	93
Duckwheat	45
Moist Soil (Wild vegetation)	424
GTR	3250
Scrub shrub	1000
Open (flooded year round)	700
	<hr/> 5804

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

3.1.1. Maintenance

(Includes: grading, gravel, culverts and mowing)

Bridges (type)	Road (type)	Miles	Cost
	Gravel	12	\$4000
	Dirt	25	\$1500
	Culverts	13	\$ 200

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

Maintenance of office, storage and grounds was completed and funded from 09. There is no way to come up with the exact cost. No major maintenance was needed.

3.2.2. Construction---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
196 miles	none	9.6 miles\ \$900

Cables
Maintained
and cost

19 cables
\$400

Signs
Maintained
and cost

37 signs
\$200

3.4. Equipment

The major equipment assigned to this project are:

2 large farm tractors, 2 medium outboard motors, 2 power units for pumping, a generator, a trash pump, 2 large disks, 2 small disks, a grain drill, a planter, an agricultural sprayer, a levee plow, 3 bushhogs and a goose-neck trailer.

3.4.1. Maintenance Cost--- \$11,129.71

3.4.2. Purchase of Equipment

High pressure steam cleaner.

3.5. Water Control System

3.5.1. Levees

Linear Feet	Type of Maintenance & cost	Construction & cost
34,200	Mowed 1 times \$1700.00	None
5,300	Mowed 3 times \$2300.00	
	Repaired washed areas \$ 700.00	None
11,500	Mowed 1 time \$1000.00	None
	<hr/> \$5700.00	

3.5.2. Control Structures---None

4. DATA COLLECTION

The objective of this activity is to collect data that will assist in the proper management of many wildlife species, especially waterfowl. Waterfowl population levels will be determined by ground counts and aerial surveys (Ducks-Problem VI, Strategies 1 & 2) and pre-season woodduck banding (Duck-Problem VII, Strategy 1.).

4.1. Checking Station Operation

Species	Man-days
---------	----------

Deer	8
------	---

Personnel within this project put more time on deer checking station operation within the Region I Deer data collection project and the Natchez Trace Project.

4.2. Habitat Surveys

Type	Man-days
------	----------

Mast Survey	1.5
-------------	-----

4.3. Population Surveys

Type	Man-days
------	----------

Bag Check	7
Waterfowl Counts	11
Raccoon Scent Post	3
Pre-Season Woodduck Banding	19
Ruffed Grouse Survey	1

5. ADMINISTRATION AND COORDINATION

Administration and Coordination activities consisted of management planning, personnel management, meetings within the agency as well as outside the agency with TVA, bimonthly reports, purchasing supplies, property inventory, site inspection hunt season recommendations and budget preparation.

6. EDUCATION

6.1. Professional Development

Training	Mandays	#Personnel
Wood Duck banding	2	2
Area Managers Meeting	10	3
Prescribed Burning Workshop	21	4

Two personnel in this project received law enforcement training that was coded to Project 1630.

6.2. Hunter Education---none

6.3. CENTS Education---none

7. INFORMATION

Deer measuring (Henry Co. and Obion Co.)

The University of Tennessee at Knoxville Wildlife Techniques Class on a field trip of the Kentucky Lake WMA's.

Information to Outdoor writers for newspaper and newsletter - waterfowl and doves

Radio Show - waterfowl

Individual contacts and Information requests - primarily waterfowl but also other topics.

8. RESTORATION

None on this project however one individual in this project spent 21.4 days on the Region I Turkey restoration project.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent*
1440	Enforcement		48
1440	Data Collection		41
1440	Admin. & Coordination		239
1440	Habitat Development		380
1440	Property Main. & Dev.		186
1440	Restoration		
1440	Education		34
1440	Information		10
Total		1002	928

10. HUNTING SUMMARY

The objective is to provide optimum waterfowl hunting opportunity while maintaining good quality hunting.

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer (A)E.S.	3	N/A	25	0
Deer (M)E.S.	2	150	64	14
Total	5	150	89	14

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Ducks	30	30	800
Geese	50	50	800
Squirrel	129	129	100
Rabbit	109	109	50
Quail	109	109	50
Raccoon	71	71	50
Dove	60	60	200

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1440-01	84,770	83,610.97
1440-02	21,640	21,956.45
1440-03	21,661	14,421.52
1440-04	0	6.08
1440-05	1,200	1,081.99
1440-06	730	759.67
1440-07	0	265.69
1440-08	6,000	387.05
1440-09	27,520	16,593.99
1440-10	0	288.47
1440-11	13,100	9,895.79
1440-14	0	3.52
1440-16	2,100	1,895.00
TOTAL	178,721	151,166.19

12. LAND ACQUISITION/LEASES

- Lease - 8,090 acres in Stewart Co. from U.S. Army Corp. Engineers
- 11,640 acres in Henry & Benton Co. From TVA.
- 886 acres in Benton Co. from Lakeshore Methodist Camp
- 2,000 acres in Benton Co. from State Parks

13. GENERAL COMMENTS AND DISCUSSION

The purpose of this project is to provide over 20,000 mandays of quality waterfowl hunting (harvesting over 5000 ducks and geese) on Kentucky Lake/Barkley WMA's by managing about 16,000 acres of critical wintering waterfowl habitat. Also to manage for small game, big game, furbearers and non-game at levels compatible with waterfowl management.

Expected manpower from other management area personnel was not utilized because the demands of their projects would not allow them to spend time on the 1440 project. Enforcement manpower needs were either not worked or were coded improperly.

Variance within the Project budget was lower than the 10% tolerance level.

Expenditures on the Project budget were lower than expected due to:

- 1) Less manpower was utilized than budgeted.
- 2) The TVA contract payment of \$6,000 (1440-08) was paid out of the FY 1989-90 budget by mistake.
- 3) Approximately \$10,000 was carried over into the next years budget (FY 1991-92) to purchase pipes and flap gates that were ordered under the FY 1990-91 budget.

Significant Activities:

- 1) The renovation of Harmon Creek WMA by the heavy equipment crew by clearing trees and shrubs off the islands to improve goose management and road maintenance to improve access.
- 2) Added force account farming due to wet weather preventing Cooperative farmers in planting their crops.

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KENTUCKY LAKE BUILDING AND CROP IMPROVEMENT

The purpose of this project is to better achieve the goals of Project 1440. This is to be accomplished by:

- (1) The construction of a shop, so that we may better maintain our equipment and (2) the addition of money to be used for the purchase of seed, fertilizer and chemicals for farming West Sandy and Camden WMA's.

LIST OF ACCOMPLISHMENTS:

- (1) Building plans were drawn up for the shop and submitted to F & A to be sent out on bids. It was held up in F & A for unknown reasons and never sent out for bids. The money was not spent and its status is currently unknown. \$11,500 was budgeted for the proposed building.
- (2) Materials were purchased for farming at West Sandy and Camden. Due to wet weather conditions we were unable to plant corn or milo so millet was planted instead. Millet is a less expensive crop so the full amount that was budgeted was not spent. \$5,000.00 was budgeted for crop improvements.

LAUDERDALE REFUGE OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Lauderdale Refuge is located in the Northeast corner of Lauderdale County. Bordered by the South Fork of the Forked Deer River on the North - Hwy 210 on the West and levees on the South and East Borders. 8 miles south of Dyersburg 3 miles North of Halls.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Dyer Co.	30 ac.	0
Lauderdale Co.	660 ac.	

1.2. Staffing

Administrative support is provided by the Region I Office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	
Tech. I	1*	1

*Vandergriff activated to Desert Storm.

1.2.2.

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	WMA Supersisor
Wildlife Office	2	Lauderdale/Dyer Co.
Wildlife Officer II	1	Regional
Wildlife Enf.	1	Regional
Biologist II	0	Regional
Biologist III	3	Statewide

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation is to address Duck Problem III, Strategy 2. By intensive agricultural cropping utilizing Co-op farming and shallow flooding over 400 acres of prime habitat will be available for wintering waterfowl. Additionally 100 acres of wheat browse will be available for geese.

2.1.1 Force Account---None

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Kutzbeans	Duck & Geese	10	15	25	0
Soybeans	Duck, Geese, Shore Birds	375	0	375	0
Wheat	Geese	100	100	100	0
			(Green Browse)		
Millet	Ducks		85	85	0
Milo	Ducks		75	75	0
Millet in Tree	Duck		53	53	0
Total		485	328	713	0

* 100 ac. doubled cropped for wheat

2.2. Vegetation Management

The management objective of the vegetation management operation is to address Quail Problem II, Strategy 2 in conjunction with levee stabilization.

Problem - Many land use practices are having adverse effects on quail and small game.

Strategies - Continue to plant lespedeza and game bird mix along levees.

Primary Species	Acres Burned	Acres Mowed	Acres Disked
	0	70	5 ac.
		Levee mowed (2)	

2.2.1. Linear Opening Management

Primary Species	Activity	Miles
Quail	mowed levees	5
Quail	Roadside seeded millet	3

2.3. Forest Management

The management objective of the forest management operation is to address: Duck Problem I, Strategy 3.

Strategies - Proper management of WMA's and Refuges to provide optimum wintering habitat that will meet all the physiological requirement of waterfowl. One of the physiological needs of waterfowl can be met in a Green Tree Reservoir (GTR). Both mast and invertebrates are important in the diet of ducks. The effort here is to establish 53 acres of Oak trees that can be flooded to provide the above mentioned food components.

Acres Under Management	Acres Clearcut	Acres Other Agricultural Practices	Acres Planted by Species	Timber Sale Revenue
53	0	0	53	Willow Oak Pin Oak Nuttall Oak Mix

* 53 ac. planted June 1990.

2.4. Water Level Management

The management objective of the water level management operation is to address: Duck Problem I, Strategy 3 emphasizing proper management of WMA's and refuges to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl. Without shallow water flooding most food crops would be unavailable for waterfowl.

Two pumps, 5 water control gates, and a series of levees will make flooding possible.

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Kutz Soybeans	25 ac.
Milo	75 ac.
Millet	85 ac.
Moist Soil	53 ac.
Soy Bean (stubble & waste)	225 ac.

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

The management objective of the access management operation is to provide safe observation of waterfowl using the refuge.

Constructed fence and gates at access area to refuge.
For safety factors along railroad.

Observation tower and grounds maintained to be both aesthetically pleasing and safe.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
0	Gravel	3	
	Dirt	3	

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

Maintenance of shop, storage and grounds was completed and funded from 09. The exact cost is unknown.

3.2.2. Construction---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
5 mi.	0	0

3.4. Equipment

The major equipment assigned to this project is the same farm tractor and equipment assigned to project 1410. In addition a side mounted mower, 16" pump, electronic laser leveler, and numerous smaller items of support equipment.

Operating motor and Pump for flooding of area.

The area is flooded by pumping with a portable hydraulic pump. The area is dewatered by a station pump. This pump is also used to protect the crops inside the levees.

3.4.1. Maintenance Cost

Fuel	Oil	Engine-oil	Grease
4,0000 gal.	Hyd-oil	2 cases	12 tubes
	55 gal.	5 filters	0

Total - \$3,640.69 cost

3.4.2. Purchase of Equipment---None

3.5. Water Control System

3.5.1. Levees

Linear Feet	Type of Maintenance & cost	Construction & cost
4,200 ft.	River Bank repair Rip Rap	\$1000

*A considerable amount is expected in FY 91-92 because of bank sluffing.

3.5.2. Control Structures

Maintenance (cost and #)	Construction (cost and #)
Moved two 20'x36"* culvert and flap gate	0

*No costs other than manpower.

3.6. Other

Repairs - Culverts flap gates and river banks. Cleaning pumping site in river continues.

4. DATA COLLECTION

Determining population levels, and species diversity is important in managing waterfowl populations on refuges. Additionally neck collar observations by color and number is important in goose management to differentiate between different populations and to monitor movements and migration patterns.

The management objective of the data collection operation is to address Duck Problem VI, Strategy 2 and Goose Problem III, Strategy 3 of the Strategic Plan.

4.1. Checking Station Operation---None

4.2. Habitat Surveys

Type	Man-days
Red Oak Planting	10
Survival	
Monitoring of Crops	10

4.3. Population Surveys

Type	Man-days
Waterfowl counts	10 days
Goose Neck Collars (54 Observations)	15 days + Volunteers

4.4. Other Data Collection (type and amount)

Shore Birds	
Eagle	(3 observed)
Swans	(4 observed)

5. ADMINISTRATION AND COORDINATION

Administration and coordination activities consists of management planning and evaluation, personnel management, coordination meetings within the agency, bimonthly reports, property inventory and budget planning.

6. EDUCATION

6.1. Professional Development

- | | |
|-------------------------------------|--------|
| 1. Chemicals safety and application | 2 days |
| 2. Prescribed Burning Workshop | 5 days |

6.2. Hunter Education---N/A

6.3. CENTS Education---N/A

7. INFORMATION

Informing the public through 5 newspapers about woodduck boxes, dedication of Observation Tower. Number of days - 2

8. RESTORATION

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent*
1450	Enforcement		30.0
1450	Data Collection		28.0
1450	Admin. & Coordination		127.8
1450	Habitat Development		31.0
1450	*Property Main. & Dev.		30.0
1450	**Restoration		10.0
1450	Education		8.0
1450	Information		2.0
Total			266.8

10. HUNTING SUMMARY

The management objective of this project addresses the Agency's Duck Strategic Plan, Problem 1, Strategy 3. The loss of wintering habitat for waterfowl is the major problem identified in the plan. Although no hunting occurs on the refuge an observation tower allows the public to view both waterfowl and nongame birds. 319 registered as visitors from Dec. through Jan. Visitors represented 32 cities from within the state and eleven states outside Tennessee were recorded.

Wildlife Refuge for waterfowl and shore Birds-No hunting

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1450-01	\$25,108.00	\$28,901.78
1450-02	5,967.00	6,672.80
1450-03	5,077.00	3,677.98
1450-04	0.00	0.00
1450-05	600.00	233.37
1450-06	100.00	0.00
1450-07	0.00	1,202.00
1450-08	0.00	497.00
1450-09	2,500.00	1,881.90
1450-10	10.00	170.00
1450-11	3,500.00	3,640.69
1450-12	0.00	0.00
1450-13	0.00	0.00
1450-14	0.00	0.00
1450-15	0.00	0.00
1450-17	0.00	0.00
1450-18	0.00	0.00
1450-19	0.00	0.00
1450-20	0.00	0.00
Total	\$ 42,682.00	\$47,041.34

12. LAND ACQUISITION/LEASES

25 ac. I.C. railroad property at entrance of refuge. Lease agreement \$25.00 for 1 year.

13. GENERAL COMMENTS AND DISCUSSION

Variance in mandays was within tolerance limits so no variance statement is offered.

Variance in budgeted amount and amount spent was above tolerance limits. The following is an explanation for this difference. The primary overspend was in budget items 01 & 02. David Vandergriff was activated to Desert Storm and a part time technician was employed for 73 days. This caused an overspend in 01 & 02. The other large variance was for the purchase of an unanticipated section of portable hose (\$1,202.00). This was also inadvertently listed under item 07.

14. OFFICIALS

Willis Wheeler, Wildlife Manager II	Harold Hurst, Region I Manager
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Jack Colwick Lands Mgmt Supervisor	Gary T. Myers, Executive Director
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WHITE OAK WMA OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

White Oak WMA is located in the southeastern area of west Tennessee. It is within the Region I administration unit.

There are five drainage canals and several creeks that flow through the WMA. The spoilbanks of these canals and the silt, log jams and beaver activity on the creeks make up the approximately 1,200 acres of swamp land within the 5,200 acres of the WMA.

County	Acres	Acres of Inholdings
Hardin	6,000	

1.2. Staffing

Administrative support is provided by the Region I office and various central office divisions.

1.2.1. Management Area Staff

Title	Number of Full Time	Number of Part Time
Manager I	1	

1.2.2. Region/Division Support Staff

Title	Number of Full Time	Responsibility
Manager III	1	WMA Supervisor
Wildlife Officer	4	Hardin, Chester & McNairy Co.
Wildlife Officer II	1	Regional
Wildlife Enf. Sup.	1	Regional
Biologist II	2	Regional
Biologist III	4	Statewide

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation is to provide as much food and cover as possible for all wildlife with the best use of funds. (Duck Problem III, Strategy 2; Quail Problem II, Strategy 2; Rabbit Problem I, Strategy 4; Dove Problem I, Strategy 5; Deer Problem II, Strategy 5; and Turkey Problem II, Strategy 2).

2.1.1 Force Account

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Millet	Duck & Turkey			55	
Millet	Dove & Quail			20	
Wheat	Dove & Quail			50	
Corn	Ducks, Deer & Turkey			8	
VA 70	Quail			16	
Japanica					
Kobe Lespedeza	Quail & Rabbit			50	
TOTAL				199	

2.1.2. Agricultural Leases---None

2.2. Vegetation Management

The objective of the vegetation management operation is to provide all wildlife with as much vegetation diversity as possible and to provide quail and turkey with the best bugging conditions, and provide hunters strips in which to walk. (*See Ag. Strategies). (Refer to Agricultural Problems and Strategies).

	Primary Species	Acres Burned	Acres Mowed	Acres Disked
Quail & Rabbit		10	150	5
Dove			15	
Turkey		5	8	
Total		15	173	5

2.2.1. Linear Opening Management---None

2.3. Forest Management---None

2.4. Water Level Management

The management objective of the water level management operation is to keep all areas not fished as dry as possible during the growing season and to assist nature in holding as much water as possible, as long as possible, during the non-growing season to provide flooded vegetation for waterfowl feeding.

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Corn	4
Millet	60
Moist Soil	516
GTR	2,300
Swamp	1,300
Total	4,180*

*Acres flooded varies with amount of rain fall received and the flood conditions of the Tennessee River since White Oak WMA is only naturally flooded. These numbers reflect the maximum amount flooded at any one time during the year.

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

The management objective of the access management operation is to provide the best possible access to the WMA.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
Culvert (4)			*
	Gravel	10	*

*Mandays spent were the only cost incurred, the county donated work to this maintenance.

3.1.2. Construction

Bridges (type)	Road (type)	Miles	Cost
Culvert (1)			*

*Mandays spent on installation were the only cost incurred, because the culvert was purchased out of previous budget year.

3.2. Buildings and Grounds

3.2.1. Maintenance

Maintenance on shop, storage shed, and grounds were conducted as needed and funded from budget item 09, however, actual costs cannot be determined from the printout format.

3.2.2. Construction---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
25 miles	5 miles at \$200	1 mile*

*Mandays spent were the only cost incurred, because this was old boundary removal.

3.4. Equipment

Major equipment assigned to this project includes a tractor, tandem disk harrow, seeder and a blade. Other equipment in use on the WMA include 2 boats, 1 boat trailer, 2 outboard motors, 1 ATV, 2 lawn mowers, 1 weedeater, 1 chainsaw, 1 plow, 1 wagon, 1 camera, 1 spotting scope, and blasting equipment.

3.4.1. Maintenance Cost

The cost of equipment maintenance and operation totals \$950.00

3.4.2. Purchase of Equipment---None

3.5. Water Control System---None

4. DATA COLLECTION

The management objective of the data collection operation is to develop accurate counts of waterfowl during the migration and harvest figures for all hunted wildlife, as well as habitat quality to determine hunting regulation needs. (Duck Problem VI, Strategy 2; Duck Problem VII, Strategy 1 and 2).

4.1. Checking Station Operation---None

4.2. Habitat Surveys

Type	Man-days
------	----------

Mast Survey	1
-------------	---

4.3. Population Surveys

Type	Man-days
------	----------

Turkey Brood Survey	2
Bag Check	5
Raccoon Scent Post	1
Wood Duck Banding	30
Bi-Weekly Waterfowl Count	11

5. ADMINISTRATION AND COORDINATION

Work was done to improve the projects objective and budget. Farm plans were drawn up with the ASCS department. Land purchase activities on 1 tracts were coordinated. A contract with animal damage control to conduct beaver control work was initiated. Worked with landowners

adjacent to the WMA in resolving drainage problems related to silted in canals and beaver problems.

6. EDUCATION

6.1. Professional Development

Firearms Training, Manager I, 3 days.
Law Enforcement Training, Manager I, 7 days.
Prescribed Burning Training, Manager I, 4 days.

6.2. Hunter Education

Wildlife Management and identification, Manager I, 2 days.
Shooting Range, Manager I, 1 day.

6.3. CENTS Education---None

7. INFORMATION

Public requests: Answered questions regarding seasons, bag limits, where to hunt, and canal drainage problems.

8. RESTORATION

Turkey trapping efforts were made on the WMA, but were a failure due to flood water, rain, and warm temperature.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days Budgeted	Man-days Spent
1460	Enforcement		18
	Data Collection		25
	Admin. & Coordination		25
	Habitat Development		57
	Property Maintenance & Dev.		32
	Restoration		5
	Education		14
	Information		5
TOTAL			186

10. HUNTING SUMMARY

The management objective of the hunting program is to allow as much hunter opportunity as the land and wildlife can withstand, without damaging the resources. (Duck Problem I, Strategy 3; Dove Problem I, Strategy 5; Turkey Problem XII, Strategy 1, Deer Problem II, Strategy 5; Quail PROBLEM II, Strategy 2; Rabbit Problem II, Strategy 2; Raccoon Problem V, Strategy 2).

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer	90	N/Q		5
Turkey	37	N/Q		5
TOTAL	127			

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Ducks	22	30	65
Geese	50	70	65
Squirrel	129	129	20
Rabbit	109	109	20
Quail	109	109	30
Raccoon/Oppossum			25
Hunting	71	71	1
Trapping	57	57	30
Woodcock	65	65	30
Snipe	45	45	100
Dove	60	60	

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1460		20,932.43
01	14,838.00	5,502.73
02	3,687.00	2,402.13
03	4,877.00	1,732.40
05	1,170.00	678.38
06	650.00	65.0
07	0	255.04
08	0	7,373.45
09	5,450.00	0
10	0	941.92
11	2,680.00	
Total	\$33,352.00	39,936.48

12. LAND ACQUISITION/LEASES

The following is a list of land that should be added to the wildlife management area for the improvement of management capabilities.

Land Owner	Acres Needed	County	Location
Billy Coffman	180	Hardin	E. of WMA
Tom C. Brasher	100	Hardin	E. of WMA
Robert, Burl & Wayne Robertson	175	Hardin	N.E. of WMA
Homer Snodgrass	400	Hardin	N. of WMA
Clayborne Wells	300	Hardin	N. of WMA
Mr. Bathoon	70	Hardin	N. of WMA
Mr. Blandinship	70	Hardin	N. of WMA
Mrs. Brooks	125	Hardin	N. of WMA
Mr. Lewis	60	Hardin	N. of WMA
Vern Chumney	300	Hardin	S. of WMA
R.G. McCulla	125	Hardin	S. of WMA
John Westly Coffman	100	Hardin	S. of WMA
Scotty & Farrell Matlock	200	Hardin	S. of WMA
Dr. Lard	200	Hardin	S. of WMA
Bewell Maxie Morey	200	Hardin	N. of WMA
Arther Brumlow	191	Hardin	S. of WMA

13. GENERAL COMMENTS AND DISCUSSION

Variance in budgeted amount and amount spent exceeded tolerance levels. This variance was primarily due to under budgeting in 01 and 02 and funds being spent out of 09 that should have come out of 11.

Variance in budgeted mandays and actual mandays worked exceeded tolerance levels. This was due to under budgeting mandays for the area manager on this project, and over budgeting his mandays on other projects. 40 days were budgeted to Kentucky Lake project and less than 2 days were actually used. The workload on the White Oak project required 27 extra days than were budgeted for.

In summary the purpose of this project is to conduct management activities on White Oak WMA to insure a minimum of 1,500 acres of quality wintering habitat for waterfowl. That in turn will provide a viable wintering duck population at optimum levels in order to achieve a harvest of 450 ducks with 300 mandays of hunting and provide maximum opportunities for big game, small game, and furbearer hunting consistent with waterfowl management and hunting.

The only improvement needed to this project is the addition of one wildlife technician to assist the Wildlife Manager in carrying out the day to day activities of work on the WMA.

14. OFFICIALS

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OBION/FORKED DEER O & M

1. INTRODUCTION

1.1. Description of Area

This project is a consolidated project which covers the following Wildlife Management Areas and Refuges; C.M. Gooch Moss Island, Ernest Rice, Sr., Tigrett, and White Lake Refuge. The staff shown below is responsible for all the areas. Area reports shown individually are attached.

County	Acres	Acres of Inholdings
Dyer	4,700	none

1.2 Staffing

1.2.1. Management Area Staff

Title	Number of Full Time	Number of Part Time
Manager II	1	0
Technician I	1	0

1.2.2. Region/Division Support Staff

Title	Number of Full Time	Responsibility
Manager III	1	0
Wildlife Officer II	1	0
Wildlife Officer I	5	0

2. MANPOWER

Project Number	Name of Project or Activity	Mandays Budgeted	Mandays Spent
1480	Enforcement	not-available	37.87
	Data Collection	" "	58.33
	Admin. & Coordination	" "	147.87
	Habitat Development	" "	49.87
	Property Main. & Dev.	" "	189.87
	Restoration	" "	7.80
	Education	" "	14.93
	Information	" "	3.27
	Total	493	509.80

TIGRETT WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1 Description of Area

Tigrett WMA is located just east of Dyersburg on the Forked Deer River in Northwest Tennessee. This area is a typical bottomland swamp.

County	Acres	Acres of Inholdings
Dyer	4,700	none

1.2.2. Region/Division Support Staff

Title	Number of Full-Time	Responsibility
Manager III	1	Regional Supervisor
Wildlife Officer	1	Dyer County

2. HABITAT DEVELOPMENT---None

2.1. Agricultural Operation---None

2.1.1 Force Account---None

2.1.2. Agricultural Leases---None

2.2. Vegetation Management---None

2.2.1. Linear Opening Management---None

2.3. Forest Management--- None

Acres Under Management	Acres Clearcut	Acres Other Silvicultural Practices	Acres Planted by Species Revenue	Timber Sale
1,500	0	0	0	0

2.4. Water Level Management

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Bottomland cypress	1,800 (natural flow)
Hardwood swamps	

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management---None

3.2. Buildings and Grounds---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
40 miles	none	2 miles @ \$79.20

3.4. Equipment

Equipment assigned to project 1480 is farm type for mowing and food plots and is not necessary on this area.

3.4.1. Maintenance Cost---None

3.4.2. Purchase of Equipment---None

3.5. Water Control System

3.5.1. Levees

Linear Feet	Type of Maintenance & cost	Construction & cost
40,000 (Estimated)	None	None

3.5.2. Control Structures

Maintenance (cost and #)	Construction (cost and #)
None	None

4. DATA COLLECTION

Problem: The loss of wetlands due to siltation build up from local farming practices and channelization of adjacent River System.

Strategy: To preserve, protect and enhance the remaining bottom-land hardwoods and viable aquatic area's thru planned timber management, and return flood plain to natural drainage.

4.1. Checking Station Operation---None

4.2. Habitat Surveys---None

4.3. Population Surveys---None

5. ADMINISTRATION AND COORDINATION

Administration and coordination activities on this area are developing new management plans.

6. EDUCATION---None

7. INFORMATION---None

8. RESTORATION---None

9. MANPOWER---See Summary

10. HUNTING SUMMARY

Problem: Lack of accessible public lands for hunting opportunities to general public.

Strategy: To provide thru enhancement and protection a viable population of wildlife species and accessible land to public hunting sector.

10.1. Big Game---None

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Ducks	30	30	1,000
Geese	70	70	500
Squirrel	110	110	200
Rabbit	110	110	400
Raccoon/ Oppossum Hunting	102	102	100
Trapping	91	91	30
Woodcock	65	65	0
Snipe	76	76	0
Dove	72	72	0

11. EXPENDITURES---Summarized in Budget #1480

12. LAND ACQUISITION/LEASES

Leases - None
Acquisition - Proposed
Owner - Billy Ozment
Acres by
County - 300
Proximity to WMA - Adjacent-to WMA on Northwest boundary.

13. GENERAL COMMENTS AND DISCUSSION

There has been a renewed interest in the Tigrett Wildlife Area in the past fiscal year. In past years, the area was allowed to degrade to an almost impossible management condition, due mainly to the fact of levee system's which cut off natural drainage to river channel. With natural drainage almost non- existant because of levee's the beaver problem also began to effect what little drainage was left. In summary a new management plan has been put in place awaiting the review and approval process, which will help restore this natural wetland back to a viable functioning system.

WHITE LAKE REFUGE

1. INTRODUCTION

1.1. Description of Area

The White Lake Refuge is located on the Obion River west of the Town of Dyersburg, in Northwest Tennessee, ten miles north of Moss-Island and eighteen miles south of Reelfoot Lake. It is within the Administrative Unit of Region I.

This area, because of its' strategic location and historical past of holding waterfowl, has been designated a waterfowl refuge. This designation and the planned management is in keeping with the concept of providing intermittent small managed wetland area's along historical migratory corridors for waterfowl.

Note: This is a newly purchased area with no budgeted activity. Major development in cooperation with Duck Unlimited will begin in 1991-92. Development for the current year will be limited to interim coop farming.

County	Acres	Acres of Inholdings
Dyer	938	none

1.2. Staffing---None NOTE: See Budget 1480 staffing summary.

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

Management objective for this area is compatible with strategic plan to address the problem of loss of local wetlands and wintering habitat. Management strategy will be to provide over wintering habitat through the planting of food-plots, and optimum use of moist soil areas.

2.1.1 Force Account---None

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Millet	Ducks	0	50	50	n/a
Soybean	Cooperator-share	350	0	350	n/a
	Total	350	0	350	n/a

2.2. Vegetation Management

The Management objective for this area consists of vegetation manipulation through mowing, disking etc., compatible with good moist soil food production to enhance overwintering habitat for waterfowl. This year vegetation management was limited to agriculture crops noted above. Approximately 400 acres was left fallow as moist soil crops. Otherwise there was no vegetation manipulation.

2.2.1. Linear Opening Management---None

2.3. Forest Management Forest Management will begin in 1991-92.

2.4. Water Level Management

Problem: Loss of overwintering habitat for waterfowl due to extensive draining of adjacent wetlands.

Strategy: To provide wintering habitat thru pumping and natural run-off to hold water on 800 ac. Re-establish a 200 acre semi-permanently inundated wetland. Manage water levels for non-game species.

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Moist soil	100
Ag. fields (stubble)	350
Bottomland Hardwoods	150
Food Plots (millets)	50

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management - To develop and maintain 10 miles of entrance and access roads.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
0	Dirt	1.0	0

3.1.2. Construction

Construction is scheduled to begin fall 1991.

3.2. Buildings and Grounds---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
8 miles	250.00	8 miles -20.00 Annual

3.4. Equipment

3.4.1. Maintenance Cost---None

3.4.2. Purchase of Equipment---None

3.5. Water Control System

3.5.1. Levees

Linear	Type of	
Feet	Maintenance & cost	Construction & cost
500	None	None

3.5.2. Control Structures---None

4. DATA COLLECTION

4.1. Checking Station Operation---None

4.2. Habitat Surveys---None

4.3. Population Surveys

None - Formal surveys are limited to regional inventories until the area becomes operational

4.4. Other Data Collection

Turkey Broud survey, Mast survey field bag check.

5. ADMINISTRATION AND COORDINATION

The daily management and coordination for White Lake Refuge to include reports, contracts, maintenance and development needs.

6. EDUCATION

6.1. Professional Development---None

6.2. Hunter Education---None

6.3. CENTS Education---None

7. INFORMATION---None

8. RESTORATION---None

9. MANPOWER---All time coded under 1480.

10. HUNTING SUMMARY---No hunting on the area.

11. EXPENDITURES---No expenditures were identified.

12. LAND ACQUISITION/LEASES

Leases - None
Land Acquisition
Future Needs

1. Land owner - Ruth Yarbrow
County - Dyer
Acres -
Proximity to Refuge - Borders refuge on North boundary

2. Land owner - Francis Yarbrow
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North boundary
3. Land owner - John Yarbrow
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North 4 boundary.
4. Land owner - Walter Yarbrow
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North boundary.
5. Land owner - Charles Yarbrow
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North boundary.
6. Land owner - Martha Marsh
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North boundary.
7. Land owner - Blanche Jones
County - Dyer
Acres
Proximity to Refuge - Borders refuge on North boundary.
8. Land owner - Dora Twilla
County - Dyer
Acres
Proximity to Refuge - Borders refuge.
9. Land owner - Lear Kirk
County - Dyer
Acres
Proximity to Refuge - Borders Refuge.
10. Land owner - Jere Kirk
County - Dyer
Acres
Proximity to Refuge - Borders Refuge.

Note: Actual acreage unknown at this time. Management objective is to purchase 1,000 ac. from all listed owners combined.

13. GENERAL COMMENTS AND DISCUSSION

This refuge was not purchased in time to establish a budget nor to implement development plans. Management was limited to cooperative farming as an interim season plan. The first phase of the White Lake Refuge Management plan is scheduled to begin during the 1991-92 budget year. The plan should be fully functional during the 1992-93 year.

ERNEST RICE, SR. WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1 Description of Area

The Ernest Rice area is located on the Obion River, west of Dyersburg, TN. and seven miles north of Moss Island in Dyer County. It is within the Region I Administrative Unit.

This area is a bottomland hardwood wetland. Management will cover a wide variety of species and will provide through natural flooding of hardwoods the concept of intermittent small managed area's for waterfowl.

Note: This is a newly purchased area with no budgeted activity.

County	Acres	Acres of Inholdings
Dyer	2,000	0

2. HABITAT DEVELOPMENT

2.1. Agriculture Operation

Management objective for this area is compatible with strategic plan to address the problem of loss of local wetlands and wintering habitat. Management strategy will be to provide over wintering habitat thru the protection and enhancement of bottomland hardwood timber thru beaver dam maintenance and opening natural drainage ie, canals, sloughs etc.

2.1.1. Force Account---None

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Soybean	Turkey	39	1	40	N/A

2.2 Vegetation Management

The management objective for this area will consist of mowing and vegetation cover strips adjacent to timber for turkey nesting and brood habitat.

Primary Species	Acres Burned	Acres Mowed	Acres Disked
Turkey	0	0	0

2.2.1. Linear Opening Management---None

2.3. Forest Management

Objective to preserve and enhance bottomland hardwoods.

Acres Under Management	Acres Clearcut	Acres other Silvicultural Practices	Acres Planted by Species
2,000	0	0	0

2.4 Water Level Management

Problem: Loss of overwintering habitat for waterfowl due to extensive loss of bottomland hardwoods.

Strategy: To provide wintering habitat thru the protection of green timber by natural drainage maintenance to insure natural flow patterns of adjacent river system.

2.4.1 Flooding (seasonal by natural flow)

Type of Vegetation Flooded	Acres Flooded
Bottomland Hardwoods	2,000

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1 Access Management

This area has no access for passenger cars and small trucks at this time. Entrance access roads are planned for this area to be built over the next 2 years.

3.1.1. Maintenance---None

3.2. Building and Grounds---None

3.3 Boundaries

Estimated Total Boundary	Miles Established And Cost	Miles Maintained And Cost
10 miles	10 - \$375.00	

3.4 Equipment

None - All equipment budgeted under 1480 and assigned to Gooch WMA, but used on this project if necessary.

3.4.1. Maintenance Cost---None

3.4.2. Purchase of Equipment ---None

3.5 Water control System

3.5.1. Levees---None

3.5.2. Control Structures---None

4. DATA COLLECTION

Problem: Loss of bottomland hardwoods.

Strategy: Monitor mast crop production and populations of waterfowl that use area. Also included here will be the Annual raccon scent post and turkey brood surveys.

4.1. Checking Station Operation (by species)

Species	Mandays
Turkey	3

4.2. Habitat Surveys

Type	Mandays
Mast	0

4.3. Population Surveys

Type	Mandays
Bag Check	2

4.4. Other Data Collection---None

5. ADMINISTRATION AND COORDINATION

The daily management and coordination for Ernest Rice WMA to include reports, contracts, maintenance and development needs.

6. EDUCATION---None

7. INFORMATION

Coordinate news releases for hunting activities on WMA.

8. RESTORATION---None

9. MANPOWER

All mandays charged under project 1480 which covers 5 WMA and includes Ernest Rice. No way to break down time spent.

10. HUNTING SUMMARY

Problem: Lack of suitable habitat and accessible lands for use by hunting public.

Strategy: To preserve, protect and enhance bottomland hardwood habitat for waterfowl and all other compatiabile species.

10.1 Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer (A)	Statewide	N/A	Unknown	Unknown
Deer (G)	6	None	Unknown	Unknown
Turkey	3	30	14	4
Total	9	30	14	4

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (day)	Estimated Total Harvest
Ducks	30	"	100
Geese	70	"	100
Squirrel	110	"	300
Rabbit	110	"	300
Raccoon/opposum	102	"	50
Trapping	91	"	10
Quail	110	"	0
Woodcock	65	"	0
Snipe	76	"	0
Dove	72	"	0

11. EXPENDITURES---See Summary 1480

12. LAND ACQUISITION/LEASES

Leases - none
acquisition - unknown at this time.

13. GENERAL COMMENTS AND DISCUSSION

All projected activities on this project were completed as scheduled. There were no maintenance needs on this area because no development has started at this time, but is projected for the future.

C.M. GOOCH WILDLIFE MANAGEMENT AREA ANNUAL REPORT

1. INTRODUCTION

1.1. Description of Area

The Gooch area is located on the Obion River just south of the town of Obion in northwest Tennessee. It is within the Region I Administrative Unit.

This area being located on the floodplain of the Obion River is managed primarily for waterfowl.

County	Acres	Acres of Inholdings
Obion	5,800	none

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

MANAGEMENT - objective for this area is compatible with strategic plan to address the problem of loss of local wetlands and wintering habitat. Management strategy will be to provide over wintering habitat thru the planting of food-plots, and optimum use of moist soil areas.

2.1.1 Force Account---None - Area under flood waters

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Corn	Ducks	0	0	250	
Soybean	Ducks	0	0	250	
	Total	0	0	500	

Note: Area crop was completely lost to flood waters.

2.2. Vegetation Management

The management objective for this area consists of vegetation manipulation thru moving, disking etc. compatible with good moist soil food production to enhance overwintering habitat for waterfowl.

Primary Species	Acres Burned	Acres Mowed	Acres Disked
Ducks	0	50	30

2.2.1. Linear Opening Management---None

2.3. Forest Management

Objective to preserve and enhance bottomland hardwoods.

Acres Under Management	Acres Clearcut	Acres Other Silvicultural Practices	Acres Planted by Species	Timber Sale Revenue
4,800	none	none	none	none

2.4. Water Level Management

Problem: Loss of overwintering habitat for waterfowl due to extensive draining of adjacent wetlands.

Strategy: To provide wintering habitat thru pumping of water on 1000 ac. plus the holding of an additional 1000 ac. of water on bottomland hardwoods from run-off. Also included here is the water management of the 600 ac. permanent pool Unit-E.

2.4.1. Flooding

Type of Vegetation Flooded	Acres Flooded
Moist Soil	1,000
Bottomland Hardwoods	1,000

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

This area has good access for passenger cars and small trucks. Entrance must be gained by crossing beneath adjacent railroad which limits larger equipment items such as tractors and heavy equipment items.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
Wood	Gravel (type II)	6	none

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

Type	Cost
Office	none
Shop	none
Storage	none
Grounds	\$50.00

3.2.2. Construction---None

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
65 miles	5 - 132.00	5 miles - 187.50

3.4. Equipment

Condition of equipment at Gooch WMA is in good shape, with the exception of sidemower which is no longer operable, A new mower has been budgeted, but purchase has been frozen by state. New sidemounted mower was purchased in this budget.

3.4.1. Maintenance Cost---\$10,951.99

3.4.2. Purchase of Equipment---1 side mounted mower

3.5. Water Control System

3.5.1. Levees

Linear Feet	Type of Maintenance & cost	Construction & cost
60,000	Routine - \$500	none

3.5.2. Control Structures---None

DATA COLLECTION

Problem: Loss of wintering habitat and reduction in populations of waterfowl using area.

Strategy: Monitor duck and goose populations using area by conducting waterfowl counts (pre-season) and harvest success by hunters.

4.1. Checking Station Operation (by species)

Species	Man-days
Ducks	10
Geese	10

4.2. Habitat Surveys

Type	Man-days
Mast	2

4.3. Population Surveys

Type	Man-days
Bag check	15

4.6. Other Data Collection--- Raccoon Scent Post - 1 manday

5. ADMINISTRATION AND COORDINATION

The daily management and coordination for Gooch WMA to include reports, contracts, maintenance and development needs.

6. EDUCATION

6.1. Professional Development---N/A covered in Moss-Island Report

6.2. Hunter Education---N/A covered in Moss-Island Report

6.3. CENTS Education---N/A covered in Moss-Island Report

6.4. Other - N/A

7. INFORMATION

Conduct public waterfowl information coordination. Coordinate newspaper releases for hunting activities on Obion/Forked WMA's.

8. RESTORATION

Built 60 wood duck nest boxes for habitat restoration.

9. MANPOWER---NOTE: All mandays under 1480 summary.

10. HUNTING SUMMARY

Problem: Lack of suitable habitat and accessible lands for use by hunting public.

Strategy: To preserve, protect and enhance habitat for wintering waterfowl population to huntable levels thru water management, food plot production. Provide hands for other hunting as feasible.

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Deer (A)	32	statewide	100	25
Deer (M)	8	statewide	150	
TOTAL	35	N/A	250	Unknown

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Ducks	30	30	1,500
Geese	70	70	800
Squirrel	110	110	400
Rabbit	110	110	300
Raccoon/oppossum hunting	102	102	300
Trapping	91	91	10
Quail	110	110	10
Woodcock	65	65	5
Snipe	76	76	0
Dove	72	72	20

11. EXPENDITURES

All budget monies listed under project 1480 is spent on activities covering (4) WMA's and White Lake Refuge.

12. LAND ACQUISITION/LEASES

Leases - None

Acquisition - (Proposed)

Owner - Tom Hopkins

#Acres by County - 400

Proximity to WMA - Adjacent to WMA on North boundary.

13. GENERAL COMMENTS AND DISCUSSION

All projected activities on this project was completed as scheduled. Except for waterfowl food plots on Gooch Unit A which were lost due to extreme flooding from adjacent Obion River. Total variance on this project from budgeted monies was a plus \$446.96. The variance from man-power estimates were as follows:

Estimate - 493

Actual - 509

The variance in both monies and man-power estimates for project 1480 were less than 10%.

MOSS ISLAND WMA ANNUAL REPORT

1. INTRODUCTION

Moss Island WMA is located in the Southwest section of Dyer County approximately 20 miles from the city of Dyersburg, in North west Tennessee. It is within the Region I Administrative Unit.

This area is located within the flood-plain of the Mississippi River which is located approximately one-half mile to the west and the Obion River which border's the area on the North, East, and southern boundaries.

1.1. Description of Area

County	Acres	Acres of Inholdings
Dyer	3,400	none

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

Management objective of the agricultural operation will consist of practices to enhance and preserve upland game habitat. The objectives used on this area are compatible with problems and strategy of the strategic plan.

Problem: Loss of habitat due to land use practices on private lands which adversely effect populations of rabbit, quail, squirrel. Also addressed here is the amount of accessible habitat to meet the demands of the hunting public for both deer, turkey and raccoon, plus the above mention species.

Strategy: To provide suitable habitat thru the planting of agriculture crops such as corn, beans, wheat etc., with portions of crop left standing for wildlife use.

Note: Although agricultural practice on this area are not directed toward waterfowl management due to the unfavorable conditions, primarily due to lack of water because agriculture fields do not flood even in extreme flood conditions. There is good habitat for waterfowl when flood water cover's bottom land hardwoods in lower elevations of area.

2.1.1 Force Account---none.

2.1.2. Agricultural Leases

Crop	Primary Species Planted for	Acres Harvested	Acres Remaining	Total Acres	Income
Corn	Raccoon	24	1	25	
Soybeans	Quail	360	0	360	
Wheat	Deer	160	3	160	
Total		<u>544</u>	<u>4</u>	<u>545</u>	

2.2. Vegetation Management

Objective on this area will be to enhance and preserve upland game habitat, which is compatible with strategic plan.

	Primary Species	Acres Burned	Acres Mowed	Acres Disked
Turkey	0		20	20
Quail	0		20	20
Rabbit	0		20	20
Total	<u>0</u>		<u>60</u>	<u>60</u>

2.2.1. Linear Opening Management---None

2.3. Forest Management

Objective to preserve and enhance bottomland hardwoods.

Acres Under Management	Acres Clearcut	Acres Other Silvicultural Practices	Acres Planted by Species	Timber Sale Revenue
2,500	0	5	Oak - .5	None

2.4. Water Level Management

Objective is to preserve and enhance bottomland hardwoods.

2.4.1. Flooding

Flooding on this area results from natural overland high waters from adjacent river systems.

Type of Vegetation Flooded	Acres Flooded
Bottomland timber	2,500

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

This area has excellent access consisting of one main road which runs across entire unit.

3.1.1. Maintenance

Bridges (type)	Road (type)	Miles	Cost
None	gravel Type II	3	none

3.1.2. Construction---none

3.2. Buildings and Grounds---none

3.3. Boundaries

Estimated Total Boundary	Miles Established and Cost	Miles Maintained and Cost
20 miles	none	1 mile @ \$75.00

3.4. Equipment---None

3.5. Water Control System

3.5.1. Levees

Linear Feet	Type of Maintenance & cost	Construction & cost
300	Routine - \$300	none

3.5.2. Control Structures---N/A

4. DATA COLLECTION

Management objective here will be to establish and maintain a healthy, viable population of turkey, deer and other wildlife species at population levels to provide quality hunting opportunities to the public.

4.1. Checking Station Operation (by species)

Species	Man-days
Turkey	6
Deer	2

4.2. Habitat Surveys

Type	Man-days
Mast survey	2
Browse survey	2

4.3. Population Surveys

Type	Man-days
Brood survey	not available
Bag check	not available
Raccoon Scent Post	1 - manday

5. ADMINISTRATION AND COORDINATION

Administration and coordination for this area consists of coordinating co-op farming program, hunt recommendations, data collection, preparing annual land use reports, preparing and maintaining current management plan.

6. EDUCATION

6.1. Professional Development

Enforcement training	R. Gray	5 days
Area Manager Annual Meeting	R. Gray	2 days
Moist soil workshop	R. Gray	0

6.2. Hunter Education---None

6.3 CENTS Education---None

7. INFORMATION

Conducted public waterfowl information meetings and coordinate newspaper releases for hunting activities on Obion/Forked WMA.

8. RESTORATION

Conducted annual turkey trapping project.

Number trapped - 2

Release location - N/A

9. MANPOWER---All mandays shown under 1480 summary.

10. HUNTING SUMMARY

Management objective will be to preserve enhance and protect wildlife species and habitat to insure huntable populations' of game and provide accessible lands to hunting public compatible with strategic plan.

10.1. Big Game

Type Hunt	Number of Days	Hunter Quota	Hunter Participation	Harvest
Turkey	3	30	22	9
Deer (A)	32	state-wide	320	15
Deer (G)	6	none	60	21
TOTAL	41	30	402	46

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Squirrel	159	159	300
Rabbit	110	110	400
Raccoon/Opossum			
Hunting	102	102	300
Trapping	91	91	10
Ducks	30	30	10
Geese	70	70	10
Quail	110	110	4
Woodcock	65	65	0
Snipe	76	76	0
Dove	72	72	10

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
1480	N/A	There is no code directly to Moss- Island. All (3) WMA expenses are coded to Project 1480.

12. LAND ACQUISITION/LEASES

Leases - None
 Acquisition - Proposed
 Owner - Terry McQuire
 # acres by county - 800
 Proximity to WMA - Adjacent to WMA on South boundary

13. GENERAL COMMENTS AND DISCUSSION

There were no significant changes involving planned management for Moss-Island WMA. All activities for this area were completed as planned. Budgeted money for this area is included in the combined 1480 Project.

REELFOOT WILDLIFE MANAGEMENT AREA

INTRODUCTION

1.1. Description of Area

Reelfoot Lake is located in the Mississippi River Floodplain Physiographic Region of extreme Northwest Tennessee. It is within the Region I Administrative Unit.

There are three major creeks that flow into Reelfoot Lake from its 240 square mile watershed. The creeks are Reelfoot, Indian and the Bayou Du Chien. The natural drainage of the lake has been leveed and its flowage consolidated to one outlet, running Reelfoot Bayou.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Lake	8,130	
Obion	11,646	2.5

1.2. Staffing

Administrative support is provided by the Region I office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	
Technician II	3	2

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
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HABITAT DEVELOPMENT

2.1. Agricultural Operation

Problem: Reelfoot NWR is holding high concentrations of Canada Geese by over developing winter habitat that prevents achieving an allowable harvest objective of 12% and holding it to 2-3%. This food source also deters flock dispersal to other locations with desirable habitat.

Strategy: Personnel built an 1100 acre waterfowl refuge with grain crops and moist soil units to provide desirable habitat. Coop farming on an additional 500 acres will provide food sources for waterfowl and other wildlife species.

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Orchard Grass, Timothy and White Clover				60	
Dwark Corn				10	
Browntop millet	Quail			20	
Japanese millet	Ducks			15	
Wheat	Geese			12	
Clover	Turkey & Deer			10	
Vetch	Turkey			6	
Barley	Geese			12	
Orchard grass Timothy	Rabbit & Quail			129	
Korean Lespedesa, Bermuda grass	Rabbit			341	
Orchard grass, White Clover, and Kobe Lespedesa, Kobe, Orchard Grass and Timothy	Quail & Rabbit			2	
Bi-color; Kobe Lespedesa, White clover	Quail			5	
Bi-color Lespedesa	Quail			10	
Var. Thorn- bergi	Quail				

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Corn	Geese and Ducks	245	150	345	
Soybeans	Deer and Quail	775.5	22	797.5	
Alfalfa	Rabbit	64	16	80	\$0
Milo	Duck, Geese, Quail	0	99.5	99.5	
Japanese, Millet	Ducks and Geese	0	13	13	

2.2. Vegetation Management

Problem: Former land use practices on the 2600 acres recently acquired by TWRA had an adverse effect on small and big game species.

Strategy: Creation of field buffers, stopping fall tillage and establishment of suitable habitat on these formerly open lands will benefit all wildlife species.

Management objective of the vegetation management operation

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Turkey	0	69	25
Geese	4	209	69
Ducks	4	68	
Deer		92	42

2.2.1. Linear Opening Management

<u>Primary Species</u>	<u>Activity</u>	<u>Miles</u>
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2.3. Forest Management

Problem: Loss of bottomland hardwood habitat has adversely affected many wildlife species. This is especially true around Reelfoot where very little timber exists.

Strategy: Planting of oak, walnut, cypress and other species will enhance wildlife by increasing habitat. Participation in the CRP Problem accomplishes this objective and provides money to the agency.

<u>Acres Under Management</u>	<u>Acres Clearcut</u>	<u>Acres Other Silvicultural Practices</u>	<u>Acres Planted by Species</u>	<u>Timber Sale Revenue</u>
3267	0	0	20 Water Willow & Pin Oak by Acorns	
			2 Loblolly Pine Seedlings	
			5 Black Walnut seedlings	
			3 Shumard Oak seedlings	
			2 Swamp Chestnut Oak Seedlings	

2.4. Water Level Management

2.4.1. Flooding

<u>Type of Vegetating Flooded</u>	<u>Acres Flooded</u>
Corn	35
Wheat	12
Moist Soil	335
Soybeans	15
Japanese Millet	20
Milo	45

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Access to the interior of Reelfoot WMA is extremely limited by motorvehicle. Only one gravel road extends 1.5 miles into the bottomland hardwood forest through agricultural fields. Reelfoot WMA is usually traversed by motor boat. Entry is provided by TWRA through six concrete boat ramps located all around the lake.

Reelfoot WMA staff is responsible for the maintenance of seven watershed lakes in the bluffs east of the WMA. Access to each lake is by gravel road to a parking lot and concrete boat ramp.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
N/A	Gravel(type 11)	4	Engineering Div.

3.1.2. Construction---N/A

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Residence	16,973
Office	1,600
Shop	7,185
Storage	778
Grounds	7,748

3.2.2. Construction---N/A

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
43.53 miles	5.2/\$579	5.5/\$194

3.4. Equipment

The condition of equipment at Reelfoot WMA continues to degrade while maintenance costs are escalating. This is due to a state wide equipment purchase freeze and non- approval of expansion budgets by agency staff. With equipment held together with wire and welding these conditions are swiftly spirally downward and costs upward.

3.4.1. Maintenance Cost---\$9402

3.4.2. Purchase of Equipment---Well and 12 Pump - \$29,200

3.5. Water Control System

3.5.1. Levees

<u>Linear Feet</u>	<u>Type of Maintenance & cost</u>	<u>Construction & cost</u>
19920	\$746	

3.5.2. Control Structures

<u>Maintenance (cost and #)</u>	<u>Construction (cost and #)</u>
Maintain concrete water control structures 1000 - 9	Built concrete water control structures -\$ 500 - 1

3.6. Other

3.6.1. Access Control

Install and build 35 gates with metal posts and cable with lock. \$35,000

DATA COLLECTION

Problem - Collection of biological data is not adequate to monitor the condition of wildlife condition of wildlife populations.

Strategy -By field order from the Nashville TWRA Staff, sufficient biological data is collected on Reelfoot WMA to make most management decisions. Critical decisions may require the collection of specific data for exact answers. Reelfoot specific data is also collected such as Cypress and Waterfowl use counts.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Deer	2
Turkey	8

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast Survey	2
Cypress survey	12

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Raccoon Scent Post	5
Turkey Brood Survey	2
Field Bag Check	20
Wood Duck nesting	2
Electrofishing	3
Waterfowl counts	10
Fish Rotenone	16
River otter tagging	2
Goose Neck Collar	
Observation	10

5. ADMINISTRATION AND COORDINATION

This project coordinates the long term management with the day to day operation of Reelfoot WMA and the watershed lakes in the bluffs to the east. The ultimate goal of 1470 is to improve and increase wildlife use opportunities at Reelfoot Lake:

Administration and Coordination activities include:

- 1) TWRA is the lead administrative agency for the long term management of Reelfoot Lake.
- 2) Coordinate with a wide array of federal, state and local agencies through the Reelfoot Technical Committee.
- 3) Administrate farming cooperative agreements on agricultural lands.
- 4) Administered the Duck Blind Registration Program (174 blinds) and blind drawing (23 blinds) in July and August respectively.
- 5) Administered 117 leases of state owned property for personal and commercial use. 86 of these leases were converted to permits to relieve administrative paperwork.
- 6) Coordinate activities at Reelfoot with the two other resident administrative agencies U.S. Fish and Wildlife Service and TN DOC, Division of State Parks.

6. EDUCATION

6.1. Professional Development

Sport Fish Creel In-Service	Manager II	2
Law Enforcement Training	Manager II	8.5
Pistol Qualification	Manager II	3
Aquatic Plant Management	Manager II	2
Management Area Annual Meeting	Manager II	
	Wildlife Technician I	20
No-Till Field Day	Manager II	1

6.2. Hunter Education

1 course 1 manday

6.3. CENTS Education---Assistance not requested

7. INFORMATION

Guides - Review all information guides provided by the agency.

News Releases - Prepare news releases for Duck Blind registration, Duck Blind drawing and waterfowl refuge information.

Video Production - 1) Assist precision shooting sports on production on bowhunting for whitetail deer. Interviewed in same. Video released for retail sale.

Still Photography and slide show production - Constantly reworking and updating film and slide library on Reelfoot Lake, Wildlife, moist soil etc.

Individual Contacts and Information requests - These occur on an almost daily basis though usually not coded on SMAR sheets due to short duration of contact.

8. RESTORATION

Turkey Trapping

Number Caught

Mandays

County of release

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
1470	Enforcement	unavailable	133
	Data Collection		40
	Admin. & Coordination		213
	Habitat Development		156
	Property Main. & Dev.		304
	Research		1
	Education		33
	Information		3
	Total		<u>883</u>

* Include all personnel, even those not budgeted.

10. HUNTING SUMMARY

Problem: Access to land for hunting by the public is becoming more and more limited due to posting and unethical hunters. Reelfoot, the most widely reconciled waterfowl hunting area in Tennessee, provided limited access to the hunting public because local hunters deemed the lake theirs.

Strategy: Reelfoot WMA provides small game and deer archery hunting in a portion of the state known for open agriculture farmed "ditch to ditch". TWRA took control of the Duck Blind Program in 1986 limiting ownership and providing annual blinds to the public by drawings.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer(A) E.S.	16	N/A	176	45
Deer(G) B.O.	4	N/A	850	30
Turkey	3	35	67	3
TOTAL	<u>23</u>	<u>35</u>	<u>1093</u>	<u>78</u>

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Ducks	30	30	3500
Geese	70	70	3500
Squirrel	159	159	795
Rabbit	110	110	330
Quail	110	110	110
Raccoon	30	102	300
Trapping	91	91	273
Woodcock	65	65	15
Snipe	76	76	15
Dove	72	72	30

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
1470	\$239,355	252,809.05 (June 30, 1991)
01	84,931	93,756
02	21,170	23,677
03	22,102	13,117
04	831	50
05	5,547	10,122
06	2,251	2,872
07	5,908	34,572
08	33,150	4,717
09	27,459	26,162
10		378
11	8,656	8,860
13		32,500
16	277,350	1,890

12. LAND ACQUISITION/LEASES

There are no lands leased to TWRA at Reelfoot Lake. Land proposed for acquisition:

- 1) Choctaw (Sanger)- @ 1000 acres in Lake County bounded by original WMA boundary (State Woods) to the East and Reelfoot Waterfowl Refuge to the south.
- 2) Odie Robertson - @ 143 acres in Lake County bounded to the North, East and West by properties already owned by TWRA.
- 3) Kelty Estates - @ 95 acres in Lake County bordered by the State Woods on the South and East boundaries.

Plus @ 6762 acres remain to be purchased to complete the 285' elevation lands, the Reelfoot Creek Sediment Basin and the Shoreline Buffer Zone Parcels. These parcels are listed in the Real Estate Office.

13. GENERAL COMMENTS AND DISCUSSION

The variance from manpower estimates for this budget is less than 12 %. (884 worked/ 992 budgeted). Joe Carter was injured on the job and was able to work only 151.5 days but was assigned 223 mandays.

14. OFFICIALS

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A.E.D.C. WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

A.E.D.C. Wildlife Management Area is owned by the U. S. Air Force. The Air Force operates a research and testing facility, the Arnold Engineering and Development Center. The Tennessee Wildlife Resources Agency operates a WMA on the surplus property around the Arnold Center. Deer is the primary species managed for. Woods Reservoir is included in the WMA.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Coffee	23,093	
Franklin	15,988	285

(Woods Reservoir: 3,980 surface acres at el. 960)

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	0
Wildlife Technician II	1	0
Wildlife Technician I	1	0

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Management Biol.	1	Supervise Region II WMAs
Enforcement Area Sup.	1	Supervise enforcement officers
Ass't. Enforcement Sup.	1	Supervise enforcement officers
Wildlife Officers	3	Law enforcement
Fisheries Biologist	1	Fish data collection
Creel Clerk	1	Fish data collection
Fish survey crew	2	Fish data collection
Fish attractor crew	2	Fish habitat development

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Corn	Deer, doves	0	27	27	0
Wheat	Deer, Turkey, Quail	0	43	43	0
Annual Mix	Quail, Deer	0	13	13	0
Sunflowers	Doves	0	25	25	0
Lespedeza	Quail	0	25	25	0
Grain Sorghum	Ducks	0	5	5	0
Soybeans	Deer, geese	0	20	20	0
TOTAL		0	158	158	0

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Corn	Deer, Quail	164.46	10.29	189.75	\$4,519.58
Soybeans	Deer, Quail	108.25	5.25	315.00	\$1,201.22
Wheat	Doves, geese	39.55	15.45	55.50	\$707.43
Hay	Deer, turkey	130.84	60.41	275.05	\$440.00
TOTAL				835.30	\$6,868.03

2.1.3 Summary of Available Land

Total acres suitable for leasing: 1,603

Total acres available for leasing: 1,472

Total acres available but not leased: 281

Total acres on contract: 1,191.05

Total acres on contract/ not planted: 355.30

(due to wet planting season)

Total acres prime farmland: 1,700

Value of services: \$69,750

2.2. Vegetation Management

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Maintain or improve the quality of WMA deer populations through various harvest strategies and habitat manipulations, including improved forest management programs.

<u>Primary Species</u>	<u>Acres Burned*</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>	<u>Acres Chemically Treated</u>
Waterfowl	45			
Deer, turkey		260		235 (2-4D for thistles)
Quail			20	

*Does not include burning by AAFB forestry crew in pine stands.

2.2.1. Linear Opening Management

Power line rights-of-way and roadsides are used as linear openings.

<u>Primary Species</u>	<u>Activity</u>	<u>Miles</u>
Quail	Planted lespedeza	2
Quail	mowed	1
Quail	disked	1

2.3. Forest Management

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Maintain or improve the quality of WMA deer populations through various harvest strategies and habitat manipulations, including improved forest management programs.

A natural resource manager is contracted by the Air Force to conduct forestry operations at A.E.D.C. The T.W.R.A. does not have its own forestry program.

2.4. Water Level Management

Problem: Loss of local wetlands and wintering habitat.

Strategy: Properly manage WMA's and refuges to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl.

2.4.1. Flooding

<u>Type of Vegetation Flooded</u>	<u>Acres Flooded</u>
Mature Hardwoods	40

Hunts Creek Greentree Area was flooded to the 1058' level. Dixie and Huckleberry Greentree Areas are presently out of the flooding rotation. Westall Swamp and Sinking pond flood naturally without manipulation.

2.5 Fisheries Habitat Management

	<u>Total Maintained</u>	<u>Added This Year</u>
Lake / Ponds (acres)	3980	0
Fish Habitat Improvements (acres)	11	2
Streams (miles)	17	0.5
Spawn Bed Structures (number)	9	2

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Most road construction and maintenance is done by the natural resources manager and the Air Force. However, TWRA does some light road work on areas directly relating to the fish and wildlife program such as duck blind access areas, food plot access roads, and greentree area access roads.

3.1.1. Maintenance

<u>Access Areas (type)</u>	<u>Roads (type)</u>	<u>Miles</u>	<u>Cost</u>
Duck blind access		2 ea.	\$1,000
	Gravel	6.5	\$5,500*

*TWRA provided gravel for greentree area access road in cooperation with Air Force contractors. Contractor did all grading and dozing and also provided a portion of the gravel.

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Manager's Residence	\$1,000
Office	\$200
Equipment storage bldg.	\$300
Hunter check station	\$300

3.2.2. Construction---None

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
90 mi.	3 (new safety zone) \$300	12 \$1,000

3.3.1 Signs

Put up 150 small information signs.
Maintained 20 large 'safety zone' signs.
Maintained 25 large 'waterfowl refuge' signs.
Erected 3 new entrance signs.

cost: \$1,100

3.4. Equipment

Most of the equipment at AEDC is agricultural (tractors, implements).

3.4.1. Maintenance Cost

This is the cumulative cost for all equipment \$10,100.38

3.4.2. Purchase of Equipment

Due to a state purchasing freeze, no new equipment was purchased.

3.5. Water Control System

3.5.1. Levees

<u>Linear Feet</u>	<u>Type of Maintenance & cost</u>	<u>Construction & cost</u>
1,000	mowing \$300	none

3.5.2. Control Structures

<u>Maintenance (cost and #)</u>	<u>Construction (cost and #)</u>
	1 \$5,000 (Hunts Creek renovation)

4. DATA COLLECTION

Problem: Collection of biological data is sometimes not adequate to monitor the progress of some deer herds.

Strategy: Utilize properly trained Agency personnel and university students to operate check stations.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Deer	90
Turkey	35

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast survey	3

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Gosling count	4
Turkey brood survey	5
Aerial waterfowl counts	4

4.4. Fisheries Data Collection

<u>TYPE</u>	<u>Man-days</u>
Creel census	70
Netting (trap and entanglement)	10
Electro fishing	6
Seining	2
Cove rotenone sampling	12

5. ADMINISTRATION AND COORDINATION

Reports, meetings, season setting, purchasing, budgeting, and personnel matters were routinely handled throughout this report period.

6. EDUCATION

6.1. Professional Development

Law enforcement training

Manager II	7 M/D
Technician II	7 M/D

Annual WMA meeting

Manager II	4 M/D
Technician II	4 M/D
Technician I	4 M/D

7. INFORMATION

Wildlife Manager gave program on wildlife management to 33 third grade students at Cowan Elementary School.

8. RESTORATION

Wild Turkey	7 trapped	released in Coffee Co.
Walleye (fingerlings)	22,156 stocked	in Woods Reservoir

9. MANPOWER

<u>Name of Project or Activity</u>	<u>Man-days Spent*</u>
Enforcement	113.9
Data Collection (game)	135.8
Data Collection (fish)	150.0
Admin. & Coordination	148.8
Habitat Development (game)	137.8
Habitat Development (fish)	110.0
Property Main. & Dev.	344.4
Restoration	27.1
Education	39.8
Information	0.9

Total	1,208.5
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10. HUNTING, FISHING, AND OUTDOOR RECREATION SUMMARY

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Maintain or improve the quality of WMA deer populations through various harvest strategies and habitat manipulations, including improved forest management programs.

10.1

VISITOR DAYS

<u>Activity</u>	<u>Public</u>	<u>Base Personnel</u>
Hunting	23,250	1,070
Fishing	16,000	1,200
Camping	3,400	1,750
Boating	1,750	300

10.2. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest (actual)</u>
Deer- Archery	3	1200	1000	75
Deer- Archery	3	1200	900	37
Deer- Gun	2	850	650	65
Deer- Gun	2	300	280	119
Deer- Gun	2	850	375	29
Deer- Muzzleloader	2	850	385	30
Deer- Gun	2	850	600	43
Deer- Archery	2	-	700	80
Deer- Gun	2	750	675	242
<u>Security area hunts (open w/ statewide seasons)</u>				<u>80</u>
DEER TOTAL	20		5565	800
Turkey- Gun	9	-	200	21

10.3. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Harvest</u>	<u>Estimated Total Hunters</u>
Squirrel	129	158	800	225
Dove	45	58	1,000	275
Quail	101	109	1,100	300
Rabbit	101	109	200	150
Raccoon	55	101	190	230
Duck	22	30	1,100	310
Goose	35	54	125	200
Woodcock	51	51	25	20

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2460*	\$81,762	\$95,996
01	52,454	48,978
02	10,402	9,692
03	10,889	6,722
05	2,626	3,426
06	1,000	1,037
07	100	243
08		244
09	2,837	2,523
10		427
11	400	997
2466*	\$46,244	\$26,015
01	10,974	7,372
02	2,071	1,476
03	2,266	1,545
08		73
09	6,069	4,765
11	5,100	16,283
16	9,000	
Total*	\$128,006	\$122,011

* These budgets are specifically designated for A.E.D.C. Wildlife Management Area.

Estimated expenditures for other services:

<u>Project</u>	<u>Estimated Expenditures</u>
WMA Supervision and Coordination	\$4,533
Game and Fish Law Enforcement	\$17,100
Waterfowl Aerial Surveys	\$1,864
Woods Reservoir Administration	\$11,220
Creel Clerk	\$22,680
Fish Sampling, Fish Attractors, Etc.	\$10,000
Support Services	<u>\$34,350</u>
	\$101,747

12. LAND ACQUISITION/LEASES---None

13. GENERAL COMMENTS AND DISCUSSION

Most activities shown in this report are on-going projects that are accomplished each year. The renovation of the Hunts Creek levee and water control structure was a much needed one-time accomplishment. Another significant accomplishment was the cooperative effort between TWRA and the AAFB Natural Resources crew to renovate hunter access roads in the north end of the area.

14. OFFICIALS

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Larry McGinn, Region II Manager	Doug Pelren, Fisheries Biologist
Tennessee Wildlife Resources Agency	Tennessee Wildlife Resources Agency
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CHEATHAM RESERVOIR WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Cheatham Reservoir Wildlife Management Area is most of the Corps of Engineers property along Cheatham Reservoir. It is operated as a waterfowl area. Nearly one fourth of the area is farmed. TWRA operates a WMA under authority of Corps of Engineers license # DACW62-3-84-187 (exp. Oct., 2009). It is operated in conjunction with Cheatham WMA, an upland unit owned by TWRA. The two areas share budgets and personnel. Cheatham Reservoir WMA contains two refuges, Dyson Ditch Refuge and Pardue Pond Refuge.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Cheatham	4,552	0

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	0
Wildlife Manager I	1	0
Wildlife Technician I	1	1

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Mgt. Biologist	1	supervision of Region II WMAs.

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Grain Sorghum	ducks, geese	0	40	40	0
Corn	ducks, geese	0	15	15	0
Wheat	geese, deer	0	48	48	0
Annual mix	quail, deer, rabbits	0	17	17	0
Millet	ducks	0	40	40	0

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Grain Sorghum	ducks, geese	0	3	3	0
Corn	ducks, geese	200*	0	200	0
Wheat	geese, deer	0	35	35	0
Millet	ducks, quail	0	75	75	0
Soybeans	deer, quail	150	0	150	0

* Estimated acreage. Some sharecrop acreage was not planted due to heavy rains.

2.2. Vegetation Management

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
quail, rabbit, deer	165	45	

2.3. Forest Management

No forest management activities are conducted at Cheatham Reservoir WMA.

2.4. Water Level Management

Problem: Loss of local wetlands and wintering habitat.

Strategy: Properly manage refuges and WMAs to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl.

2.4.1. Flooding

<u>Type of Vegetation Flooded</u>	<u>Acres Flooded</u>
grain sorghum	127
corn	15
millet	40
moist soil (natural veg.)	150
hardwood timber	150

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management---None

3.2. Buildings and Grounds---Cheatham Reservoir WMA has no buildings or workbase, except those shared with Cheatham WMA.

3.2.2. Construction---None

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
50 mi.	0	0

3.4. Equipment

1 140 hp. 4WD tractor, 1 portable pump/power unit, 1 barge-mounted pump/power unit, implements, outboards.

3.4.1. Maintenance Cost \$4,000

3.4.2. Purchase of Equipment

A used military 'bridge erection boat' was purchased from the surplus depot; \$2,250.

3.5. Water Control System

3.5.1. Levees---None

3.5.2. Control Structures

Maintenance
(cost and #)

Construction
(cost and #)

1 (Hudgins Slough- concrete above and below control structure to stop flow underneath, & rip-rap. concrete: \$1500

2 (Johnson Creek- 120' of pipe, 1 flap gate, 2 screw gates) gates:
\$1935.30 pipe: \$500.00

3.6. Other

4. DATA COLLECTION

Problem: Determining population levels on major waterfowl concentration areas.

Strategy: Conduct ground counts in each region and compare with aerial counts.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
----------------	-----------------

Deer..	2
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4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
-------------	-----------------

Mast survey	0.5
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4.3. Population Surveys

Type	Man-days
gosling count	2
bag check	2
aerial duck count	1
ground duck count	1

5. ADMINISTRATION AND COORDINATION

This section should be used to give a general description of the type of administration and coordination that was done. They will generally be those activities covered by the SMAR codes under Support Services.

Attend meetings, set seasons, purchase supplies, make reports, record inventory.

6. EDUCATION

6.1. Professional Development

Law enforcement	5	M/D
Statewide WMA meeting	3	M/D
Burning workshop	4	M/D

6.2. Hunter Education---None

6.3. CENTS Education---None

7. INFORMATION---N/A

8. RESTORATION---None

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

10. HUNTING SUMMARY

Problem: Loss of local wetlands and wintering habitat.

Strategy: Properly manage refuges and WMAs to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl.

10.1. Big Game

Deer hunting was open with statewide seasons. Turkey hunting was open with statewide seasons on the south side of the river.

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer/Archery Either Sex	32		300	unknown
Deer/Muzzleloader-Archery Buck only	7	-	300	"
Deer/Gun-Muzz.-Archery Buck Only	24	-	1,000	"
Deer/Muzzleloader-Archery Either Sex	4	-	300	"
TOTAL	67			"

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	148	160	300
Dove	54	60	30
Rabbit	99	111	30
Quail	99	111	80
Wood Duck (Sept.)	5	5	200
Duck	17	30	500
Canada Goose	39	55	250

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
2410*	\$90,624	\$82,777
01	51,634	50,974
02	11,589	11,755
03	11,213	4,358
05	3,118	3,243
06	1,000	920
07		350
08		235
09	7,250	6,768
10		94
11	1,520	474
16	3,300	3,600
2416*	\$34,031	\$29,683
01	15,238	18,086
02	3,620	4,074
03	2,853	1,004
08		28
09	9,670	33,802
11	2,650	2,679
2417	\$14,311	\$9,597
01	6,235	5,938
02	1,404	1,314
03	1,520	640
08		12
09	2,590	135
11	2,562	1,556
Total	\$138,966	\$122,057

*Budgets shared with Cheatham WMA.

12. LAND ACQUISITION/LEASES---N/A

13. GENERAL COMMENTS AND DISCUSSION

The water control structure at Hudgin's slough developed a fast leak during pumping operations in October, 1989. TWRA's heavy equipment unit tried plugging the leak. Plugging failed, so a temporary dam was built above the structure. This allowed the area to be flooded on schedule. The structure was repaired in July, 1990.

New 10" pipes and water gates were installed in the Johnson Creek area in June, 1991.

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CHEATHAM WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Cheatham WMA is an upland area owned by TWRA. It is managed primarily for deer and small game. It is mostly forested and has an active TWRA forestry program. Budgets and manpower are shared with Cheatham Reservoir WMA, a waterfowl area along Cheatham Lake.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Cheatham	20,810	0

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	0
Wildlife Manager I	1	0
Wildlife Technician I	1	1

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Mgt. Biologist	1	Supervise Region II WMA's

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
corn	deer, quail	0	30	30	0
grain sorghum	deer, quail	0	6	6	0
annual mix	deer, quail	0	25	25	0
clover	deer, turkey	0	20	20	0
wheat	deer, quail	0	15	15	0
Lespedeza	quail	0	10	10	0

2.1.2. Agricultural Leases---None

2.2. Vegetation Management

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Maintain or improve the quality of WMA deer populations through various harvest strategies and habitat manipulations, including improved forest management programs.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
deer, turkey, quail	18	65	30

2.2.1. Linear Opening Management

<u>Primary Species</u>	<u>Activity</u>	<u>Miles</u>
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2.2.2. Field Development

Constructed 3 new fields, totalling 11.5 acres.

2.3. Forest Management

For detailed information on forestry activities, see Forestry Annual Report (90-2).

2.4. Water Level Management---N/A

2.4.1. Flooding---None

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Road construction is done through the forestry program. Road maintenance is done through the game management program.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
	Type II & III	25.0	

3.1.2. Construction

Road construction information is included in Forestry Annual Report (90-2).

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Residence	\$1,215.41
Check Station	\$354.34
Deer pen	\$201.29
Tractor Shed	\$538.94

3.2.2. Construction

Installed buried phone line, 3 miles. \$247.95

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
60 mi.		6.0 \$353.25

3.4. Equipment

3 farm tractors, 1 road grader, 3 discs, 2 bush-hogs, 1 crawler-fireplow, 2 chainsaws, 1 lawnmower, 1 4-wheeler ATV.

3.4.1. Maintenance Cost---\$2,928.83

3.4.2. Purchase of Equipment

4WD ATV (4-wheeler) \$3,600.00

3.5. Water Control System---N/A

4. DATA COLLECTION

Problem: Collection of biological data is sometimes not adequate to monitor the progress of some deer herds.

Strategy: Utilize properly trained Agency personnel and university students to operate check stations.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Deer	88

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast survey	2

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
bag check	2
Turkey brood survey	3

5. ADMINISTRATION AND COORDINATION

Season setting, purchasing, budgeting, record keeping, and personnel management were routinely handled.

6. EDUCATION

6.1. Professional Development

Law Enforcement	7	M/D
Annual WMA meeting	7	M/D
Controlled Burning Workshop	4	M/D

6.2. Hunter Education---None

6.3. CENTS Education---None

7. INFORMATION

Public relations and information services: 3.8 M/D

8. RESTORATION

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

* Include all personnel, even those not budgeted.

10. HUNTING SUMMARY

Problem: Some hunters either do not have a place to hunt or do not know where to hunt.

Strategy: Seek to establish optimum seasons on state and federally owned property.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Archery	3	-		20
Archery	3	-		5
Archery	3	-		11
Gun	2	700	500	51
Gun	2	700	350	39
Gun	2	700	500	35
Gun (ES)	2	500	350	180
Muzzleloader	2	500	250	37
TOTAL	19			378

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	135	160	3,000
Rabbit	107	111	25
Quail	107	111	200
Raccoon	31	102	100
Woodcock	54	64	0
Dove	52	60	100

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2410*	\$90,624	\$82,777
2416*	\$34,031	\$29,683
Total	\$124,655	\$112,460

*Budgets shared with Cheatham Reservoir WMA.

12. LAND ACQUISITION/LEASES---None

13. GENERAL COMMENTS AND DISCUSSION

Cheatham WMA personnel are used extensively in turkey restoration at other locations.

14. OFFICIALS

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CUMBERLAND SPRINGS WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Cumberland Springs is a tract of privately owned property that the TWRA leases for a wildlife management area. The Moore County Wildlife Officer acts as the wildlife manager. Little habitat development work is done. Deer is the primary species managed for. It is an upland site, and is highly accessible via state and county roads. Motlow State Community College is within the WMA boundary. The WMA almost touches the city limit of Tullahoma.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Moore	6,079	

1.2. Staffing

No staff is assigned to Cumberland Springs WMA. Enforcement, boundary marking, and other WMA duties are handled by the county Wildlife Officer, in addition to his other duties.

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Wildlife Officer	1	acts as Wildlife Mgr.
Lands Mgt. Biologist	1	Supervise Region II WMAs.

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation---N/A

2.1.2. Agricultural Leases

TWRA does not control agricultural leases on Cumberland Springs, however the small game development program was used to accomplish some habitat enhancement work. 14 acres were planted in Korean lespedeza and annual food plot mix.

2.2. Vegetation Management---None

2.2.1. Linear Opening Management

A power line crossing the WMA provides a linear opening at Cumberland Springs, but TWRA does no management.

2.3. Forest Management---None

2.4. Water Level Management---None

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

No access management is done, except for sometimes closing a jeep trail to control litter or other problems.

3.1.1. Maintenance

3.1.2. Construction

3.2. Buildings and Grounds

3.2.1. Maintenance

The portable check station for Cumberland Springs is in poor condition, but may never be used again anyway. Boyd's grocery is currently used as the check station.

3.2.2. Construction---None

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
25 mi.	0	5 mi., \$300

3.4. Equipment

No major equipment is assigned to Cumberland Springs WMA.

3.4.1. Maintenance Cost

\$20 (chain saw)

3.4.2. Purchase of Equipment---None

4. DATA COLLECTION

Problem: Collection of biological data is sometimes not adequate to to monitor the progress of some deer herds.

Strategy: Utilize properly trained agency personnel and university students to operate check stations.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Deer	7.3

4.2. Habitat Surveys---None

4.3. Population Surveys---None

5. ADMINISTRATION AND COORDINATION

Season seting, deer modeling, record keeping.

6. EDUCATION

7. INFORMATION

8. RESTORATION

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

* Include all personnel, even those not budgeted.

10. HUNTING SUMMARY

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Maintain or improve the quality of WMA deer populations through various harvest strategies.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Archery	3	-	unknown	2
Archery	3	-	"	2
Gun	2	500	225	24
Gun	2	-	unknown	17
Gun	2	-	"	7
Juvenile	2	-	"	7
Gun (ES)	2	250	150	66
TOTAL	16			125

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	142	160	150
Dove	51	60	0
Quail	106	111	60
Rabbit	106	111	30
Raccoon	95	102	30

11. EXPENDITURES

Cumberland Springs WMA does not have its own budget, so expenditures are not accurately tracked. The primary expenditure is for the lease payment, \$16,581.38.

12. LAND ACQUISITION/LEASES

The entire Cumberland Springs WMA is a lease.

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

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Cumberland Springs Land Co., Inc.
c/o Thomas G. Armour
Farmers Bank of Lynchburg
Lynchburg, TN 37352

EAGLE CREEK WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Eagle Creek Wildlife Management Area (formerly Champion International WMA) is leased from Champion International Corporation. It is an upland area characterized by rolling to steep terrain, hardwood forest, extensive clear-cuts, and young pine plantations. The primary species managed for is deer. There are no personnel assigned to the WMA. A Wildlife Officer for Wayne County lives on the WMA and assumes some wildlife management duties. The primary management tool is season setting. There is no separate budget for Eagle Creek WMA. Operating funds come from the Region II WMA Supervision budget.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Wayne	22,000	

1.2. Staffing

1.2.1. Management Area Staff

No WMA personnel are assigned to Eagle Creek. The Wayne County Wildlife Officer handles most game management duties at Eagle Creek WMA.

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Management Biologist	1	Supervise Region II WMAs

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation---None

2.2. Vegetation Management

TWRA's vegetation management at Eagle Creek is limited to mowing in public use areas.

2.2.1. Linear Opening Management

Power line right-of-ways provide linear openings. They are maintained by the power companies.

2.3. Forest Management

Forest management activities are conducted by Champion International Corp. TWRA does not participate in the forestry program.

2.4. Water Level Management

No water level management activities are conducted at Eagle Creek WMA. The location and topography are not suitable for waterfowl management.

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Access is provided by an extensive network of forestry roads built and maintained by Champion International Corp. Some county and state roads also pass through or near the WMA.

3.2. Buildings and Grounds

3.2.1. Maintenance

The log building that is used for a hunter check station is in poor condition, but works fine as a check station for a few days a year. Maintenance includes electricity and minor repairs.

<u>Type</u>	<u>Cost</u>
Check Station	\$200

3.2.2. Construction---None

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
87 mi.		15 mi., \$1500

3.4. Equipment---None

3.5. Water Control System

4. DATA COLLECTION

Problem: Collection of biological data is sometimes not adequate to monitor the progress of some deer herds.

Strategy: Utilize properly trained Agency personnel and university students to operate check stations.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Deer	7.9

5. ADMINISTRATION AND COORDINATION

Season setting and coordination with the landowner were handled as part of the WMA supervisor's duties.

6. EDUCATION---none
7. INFORMATION---none
8. RESTORATION---none
9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

* Include all personnel, even those not budgeted.

10. HUNTING SUMMARY

Problem: As statewide herds continue to grow, some Wildlife Management Areas are becoming less important as places to hunt deer, either because of geographical location or poor quality deer populations.

Strategy: Tailor the management of deer herds on WMA's to fit the needs and demands of the various hunting interests, ranging from optimum deer populations for maximum hunting opportunity on some areas, to implementing quality deer hunting strategies on other WMA's.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer/archery	3	-	unknown	4
Deer/archery	3	-	"	1
Deer/gun	2	-	"	36
Deer/gun	2	-	"	29
Deer/gun	2	-	"	8
Deer/gun	2	-	"	12
Deer/gun	2	-	"	14
Deer/gun	2	-	"	17
TOTAL	18			121

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	135	160	200
Dove	51	60	0
Quail	102	111	30
Rabbit	102	111	10
Raccoon	91	102	20

11. EXPENDITURES

Eagle Creek does not have its own budget, so expenditures are not accurately tracked. The primary expenditure is for manpower (see item 9.) and the property lease (\$9000).

12. LAND ACQUISITION/LEASES

Eagle Creek is leased from Champion International Corporation. The 1989 lease payment to Champion was \$5000. A new lease has been signed which calls for payments of \$9,000 per year, and expires Sept. 30, 1993. Payment for 1990 is past due.

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

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HERMITAGE WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Hermitage Wildlife Management Area is Department of Conservation property at Andrew Jackson's historic home, the Hermitage. The home and adjoining property that is developed for tourists is not included in the WMA. TWRA's activities here are minimal. Farming is done by a sharecropper that lives on the property. The archery range is maintained by an archery club. The primary hunting activity is dove hunting, and most of that occurs on the first three days of the season. It is operated by the staff of Percy Priest WMA.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Davidson	460	0

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager I	1	0
Wildlife Technician I	1	0

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Management Biologist	1	Supervise Region II WMAs

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account---None

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Soybeans	quail, rabbits	162	18	180	0
Bean/millet					
hay	doves	36	0	36	0
Wheat	doves	40	24	64	0

2.2. Vegetation Management---None

2.3. Forest Management---None

2.4. Water Level Management---None

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Access to the WMA is through a cable at Shute's Lane. TWRA personnel used a small dozer to push back woody vegetation along the farm road from Shute's Ln. to the back of the WMA, and re-dug a small pond.

3.1.1. Maintenance

<u>Bridges</u> <u>(type)</u>	<u>Road</u> <u>(type)</u>	<u>Miles</u>	<u>Cost</u>
	dirt	1	\$300

3.1.2. Construction---None

3.2. Buildings and Grounds

The archery club built a picnic pavilion at the archery range.

3.2.1. Maintenance---None

3.2.2. Construction---None

3.3. Boundaries---None

3.4. Equipment

TWRA has no equipment assigned to Hermitage WMA. Equipment assigned to Percy Priest WMA is used at Hermitage.

3.5. Water Control System---N/A

4. DATA COLLECTION

Problem: Progress toward accomplishment of objectives can not be monitored properly without information on populations, harvests, and trends.

Strategy: Conduct surveys to determine use, harvest, and the effects of strategies and regulations.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
Dove	3.1

4.2. Habitat Surveys---None

4.3. Population Surveys

Type	Man-days
Field Bag Check	1.2

5. ADMINISTRATION AND COORDINATION

Season setting, record keeping, sharecrop agreements, purchasing, and budgeting were routinely handled during this report period.

6. EDUCATION

6.1. Professional Development---none

6.2. Hunter Education---none

6.3. CENTS Education---none

7. INFORMATION

Phone calls 1.5 m/d

8. RESTORATION

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

* Include all personnel, even those not budgeted.

10. HUNTING SUMMARY

Problem: A lack of public hunting lands near metropolitan areas limits hunting opportunities.

Strategy: Provide dove fields on WMAs.

10.1. Big Game---N/A

10.2. Small Game

<u>Type Hunt</u>		<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	not open	160		0
Dove	16	60		350
Rabbit (young sp.)	151	111		30
Quail (young sp.)	151	111		30
Raccoon	not open	102		
Dog training	227	365		200

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2470	\$5,273	\$2,657
01	1,209	1,991
02	298	452
03	266	93
08		120
09	1,000	
11	2,500	
Total	\$5,273	\$2,657

12. LAND ACQUISITION/LEASES

The Memorandum of Agreement with the Department of Conservation for Hermitage WMA is dated November, 1972. There is no expiration date.

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

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Les Brown, Wildlife Manager
Box 807
LaVergne, TN 37086
(615) 459-2188

LAUREL HILL WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Laurel Hill WMA is located in southern middle Tennessee. It is within the Region II administrative unit. The Little Buffalo River is the only major river that flows through the area. Laurel Hill Lake and V.F.W. Lake, both TWRA lakes, are within the WMA boundaries. The Natchez Trace Parkway passes through the WMA.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Lawrence	14,768	0
Lewis	200	0

1.2. Staffing

Administrative support is provided by the Region II office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	
Wildlife Technician I	1	

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Wheat	dove, quail, turkey, deer	0	84	84	0
Millet	dove	0	15	15	0
Corn	deer, turkey	0	12	12	0
Lespedeza	quail	0	60	60	0
Annual Mix	quail	0	24	24	0
Clover, 30-06	deer	0	17	17	0
Clover, Crimson	deer	0	16	16	0
TOTAL		0	228	228	0

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Corn	deer, turkey	69	23	92	0
Wheat	deer, turkey, quail	43	14	57	0
Grain Sorghum	deer, turkey, quail	9	3	12	0
Hay	dove, quail, deer	15	5	20	0
TOTAL		136	45	181	0

2.2. Vegetation Management

Productive quail habitat on private land is often closed to hunting to the general public. Vegetation is managed on Laurel Hill WMA in an effort to maintain optimum quail populations and hunter use.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
deer, quail, turkey	60		
dove, deer, turkey, quail		180	
quail, turkey, deer			100

2.3. Forest Management

The south half of Laurel Hill has historically had low turkey populations. To address the shortage of dense turkey populations, forestry work is being done in an effort to provide a healthy wild turkey population for trapping and hunting opportunities.

<u>Acres Under Management</u>	<u>Acres Clearcut</u>	<u>Acres Other Silvicultural Practices</u>	<u>Acres Planted by Species</u>	<u>Timber Sale Revenue</u>
15	0	0	0	0

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
concrete		4 ea.	
	gravel	27.6	

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Number</u>	<u>Cost</u>
Residence	3	\$2,500
Check Station	1	200
Shop	1	175
Storage Sheds	4	100
Grounds	2	300

3.2.2. Construction---None

3.3. Boundaries

<u>Estimated</u> <u>Total</u> <u>Boundary</u>	<u>Miles</u> <u>Established</u> <u>and Cost</u>	<u>Miles</u> <u>Maintained</u> <u>and Cost</u>
50 mi.		25 mi.

12 entrance signs maintained and painted, 20 road signs constructed.

3.4.1. Maintenance Cost---\$9,367

3.4.2. Purchase of Equipment---None

4. DATA COLLECTION

In order to collect biological data that is adequate to monitor the progress of the deer herd, properly trained agency personnel operate a check station.

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
deer	38
turkey	26
raccoon	7

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast survey	2

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Quail census	2
Deer modeling	1
Field bag check	3
A.P.C. deer study	0
Turkey brood survey	1

5. ADMINISTRATION AND COORDINATION

Reports, meetings, season setting, purchasing, budgeting, and personnel matters were routinely handled throughout this report period.

6. EDUCATION

6.1. Professional Development

Annual Wildlife Manager's Meeting	- Gene White	- 3 M/D
	Al Pollock	- 3 M/D
Prescribed Burning Workshop	Gene White	- 4 M/D
	Al Pollock	- 4 M/D

7. INFORMATION

Personal contacts - 5 M/D

8. RESTORATION

Wild Turkey

Prepared trap site and baited - 2 M/D

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		26.6
	Data Collection		79.13
	Admin. & Coordination		40.73
	Habitat Development		81.93
	Property Main. & Dev.		256.46
	Restoration		0
	Education		8.06
	Information		1.00

Total

10. HUNTING SUMMARY

To help compensate for productive quail habitat that is being closed to hunting, Laurel Hill WMA is being managed for optimum quail populations, hunter use, and dog training compatible with other species demands.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer (A) E.S.	2	-	55	20
Deer (A) E.S.	2	-	80	10
Deer (A) E.S.	2	-	35	15
Deer (A) E.S.	2	-	50	5
Deer (G) B.O.	2	500	325	58
Deer (G) B.O.	2	500	200	11
Deer (G) E.S.	2	225	150	73
TOTAL	14		745	192
Turkey	3			
Turkey	3			
Turkey	3			
Turkey	3			
TOTAL	12			

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	160	160	250
Rabbit	42	111	150
Quail	44	111	350
Raccoon / Oppossum	12	102	325
Woodcock	12	64	20
Dove	30	57	500
Trapping	31	92	0

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2440	\$62,661	\$67,780
01	41,139	44,837
02	9,464	10,777
03	8,518	2,058
05	1,500	3,654
06	40	254
07		267
08		195
09	1,500	4,124
11	500	1,610
2446	\$35,588	\$22,106
01	12,674	10,051
02	2,963	1,982
03	2,601	601
07		430
08		50
09	10,196	5,409
11	4,154	2,680
16	3,000	900
Total	\$98,249	\$89,886

12. LAND ACQUISITION/LEASES

All lands should be purchased which lie between Lewis County on the north, Hwy. 64 and Turnpike Rd. on the south, Natchez Trace Parkway on the west, and Napier Rd. on the east.

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

Gary T. Myers, Executive Director Tennessee Wildlife Resources Agency P. O. Box 40747 Nashville, TN 37204 (615) 781-6552	Barry Sumners, Lands Mgm Biologist Tennessee Wildlife Resources Agency P. O. Box 40747 Nashville, TN 37204 (615) 781-6622
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Larry McGinn, Region II Manager Tennessee Wildlife Resources Agency P. O. Box 40747 Nashville, TN 37204 (615) 781-6622	Gene White, Wildlife Manager Rt. 4 Hood Rd. Lawrenceberg, TN 38464 (615) 762-2079
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OLD HICKORY WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Old Hickory Wildlife Management Area consists of most of the Corps of Engineers property at Old Hickory Reservoir. It is divided into three units and Lock 5 Refuge. It is managed primarily for waterfowl.

<u>Unit</u>	<u>County</u>	<u>Acres</u>	<u>of Inholdings</u>
I	Wilson, Sumner, Trousdale	11,040	
II	Wilson, Sumner, Davidson	9,029	
III	Trousdale	7,746	
Lock 5 Ref.	Trousdale, Wilson	900	

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	0
Wildlife Technician II	1	0
Wildlife Technician I	1	1

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Mgt. Biologist	1	Supervise Region II WMAs

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Grain Sorghum	Ducks	0	140.7	140.7	0
Corn	Ducks, deer, geese	26	4	30	\$1,049.36*
Wheat	Geese, Deer, Doves	27	7	34	0
Barley	Geese	0	1	1	0
Sunflowers	Doves	8	0	8	0
Clover	Deer	0	3	3	0
Popcorn	Doves	1	0	1	0
Brown top Millet	Doves	18	1	19	0
Soybeans	geese, quail	25	5	43	0
Ryegrass	geese, deer	0	3	3	\$80.00
Hay	geese, deer	0	30	30	0
TOTAL		105	194.7	312.7	\$1,129.36

* 1380 bu of corn was still in the grain bin as of 07/01/91 (not included in income figures).

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Grain Sorghum	Ducks	0	18	18	0
Corn	Ducks, Geese, Deer	544.21	27.5	571.7	\$12,437.86
Hay	Deer, geese, dove	42.3	10.7	53.0	\$80.00
Soybeans	Deer, Quail	166.7	8.7	175.4	\$4,230.26
TOTAL		753.21	64.9	818.1	\$16,748.12

2.2. Vegetation Management

Problem: Shortage of quality wintering goose habitat is limiting the number, distribution, and length of time that geese are in Tennessee.

Strategy: Provide more and better wintering goose habitat on WMAs by providing increased food and clearing of shorelines.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Goose	0	30	0
Deer	0	15	0
Quail	8	2.5	2
Rabbit	8	2.5	0

2.3. Forest Management---None

2.4. Water Level Management

Problem: Loss of local wetlands and wintering habitat.

Strategy: Properly manage WMA's and refuges to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl.

2.4.1. Flooding

<u>Type of Vegetation Flooded</u>	<u>Acres Flooded</u>
Grain Sorghum	155
Woods	15

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Roads and gates were maintained. Gates were opened for hunter access and kept locked after hunting season.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
	gravel	4	\$15 (3 loads chert)
	dirt	14	\$10 (2 loads chert)

3.1.2. Construction---None

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Manager's Residence	\$599.42
Aide's mobile home	0
Boat dock	\$717.52
Maintenance shop	\$16.44
Tractor shed	0
Grounds	\$19.97
Grain bins	0
Storage building	0
Storage shed	0

3.2.2. Construction

<u>Type</u>	<u>Cost</u>
-------------	-------------

New Equipment Storage Bldg. (materials) \$196.62

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
120 mi.	0	10 mi. (\$10)
<u>Gate Repair</u>	<u>cost</u>	
1 gate	\$36.61	

3.4. Equipment

3.4.1. Maintenance Cost---\$16,492.82

3.4.2. Purchase of Equipment

A bridge erection boat was purchased from surplus at a cost of \$2,250.

A 20 hp lawn mower was purchased to maintain the grounds at a cost of \$4,992.

3.5. Water Control System

3.5.1. Levees

<u>Linear Feet</u>	<u>Type of Maintenance & cost</u>	<u>Construction & cost</u>
3,000	mow \$250	
200	rebuild \$70	

3.5.2. Control Structures

<u>Maintenance (cost and #)</u>	<u>Construction (cost and #)</u>
2 \$127.52	

4. DATA COLLECTION

Problem: Determining population levels on major waterfowl concentration areas.

Strategy: Conduct ground counts in each region and compare with aerial surveys.

4.1. Checking Station Operation

<u>Species</u>	<u>Man-days</u>
----------------	-----------------

Deer	14
------	----

4.2. Habitat Surveys---None

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Field Bag Check	7
Turkey Brood Survey	2
Waterfowl Aerial Survey	1
Waterfowl Ground Survey	10
Goose Harvest Survey	2
Gosling Survey	4

4.4 Other Data Collection

Goose Collar Identification	12 M/D
Wood Duck Banding	20 M/D
Goose Banding/collaring	10 M/D
Turkey Trapping / Banding	8 M/D

5. ADMINISTRATION AND COORDINATION

Reports, meetings, season setting, purchasing, budgeting, inventory, and personnel matters were routinely handled throughout this report period.

6. EDUCATION

6.1. Professional Development

Law Enforcement Training	7 M/D
Annual WMA meeting	7 M/D
Goose Management Symposium	4 M/D
Media Interview Training	1 M/D
Prescribed Burning Workshop	5 M/D

6.2. Hunter Education---none

6.3. CENTS Education---none

7. INFORMATION

Video production	1 M/D
Public Talks	1 M/D

8. RESTORATION

Species	Number Moved	Release Location
Canada Geese	150	to Cordell Hull
Canada Geese	25	From Rutherford Co.

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
2430	Enforcement		
2430	Data Collection		
2430	Admin. & Coordination		
2436	Habitat Development		
2430	Property Main. & Dev.		
2430	Restoration		
2430	Education		
2430	Information		

Total

10. HUNTING SUMMARY

Problem: Loss of local wetlands and wintering habitat.

Strategy: Properly manage WMA's and refuges to provide optimum wintering habitat that will meet all the physiological requirements of waterfowl.

10.1. Big Game

Deer hunting is open with statewide seasons. Turkey Season is open with statewide season only upstream from Hwy. 231.

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Estimated Harvest</u>
Archery	33	-	40	7
Muzzleloader	14	-	40	8
Gun	37	-	55	15
TOTAL	84			30

10.2. Small Game / Waterfowl

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel	160	160	30
Dove	60	60	30
Rabbit	111	111	10
Quail	111	111	15
Raccoon	101	101	10
Ducks	30	30	1015
Geese	70	70	1200

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2430	\$77,272	\$70,200
01	38,351	43,270
02	8,508	9,783
03	8,693	6,126
05	3,550	2,757
06	1,200	927
07	3,200	561
08		315
09	8,150	3,182
11	2,120	3,240
13		30
16	3,500	
2436	\$49,636	\$38,113
01	15,295	11,959
02	3,498	2,729
03	3,732	2,076
05	100	
06		11
07	200	178
08		38
09	17,629	16,927
11	6,182	4,191
16	3,000	
2437	\$17,653	\$15,165
01	7,148	6,373
02	1,555	1,491
03	1,332	599
07	300	90
08		25
09	3,418	335
11	3,900	6,248
Total	\$144,561	\$123,578

12. LAND ACQUISITION/LEASES

Proposed land acquisition:

<u>Landowner</u>	<u>Acres</u>	<u>County</u>	<u>Location</u>
Agnes Graves	24.7	Wilson	Adjoins WMA in McMillan Bottom
Ned Bradley	16.5	Wilson	Adjoins WMA in McMillan Bottom

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

Gary T. Myers, Executive Director	Barry Sumners, Lands Mgt. Biologist
Tennessee Wildlife Resources Agency	Tennessee Wildlife Resources Agency
P. O. Box 40747	P. O. Box 40747
Nashville, TN. 37204	Nashville, TN. 37204
(615) 781-6552	(615) 781-6622

Larry McGinn, Region II Manager	Ben Layton, Wildlife Manager
Tennessee Wildlife Resources Agency	4050 Canoe Branch Rd.
P. O. Box 40747	Lebanon, TN 37087
Nashville, TN. 37204	(615) 444-6673
(615) 781-6622	

PERCY PRIEST WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Percy Priest Wildlife Management Area is the Corps of Engineers property of the J. Percy Priest Reservoir project. The WMA is divided into two units. Unit I is the smaller unit and is used primarily for hunting dog field trials. Unit II is open to hunting with the statewide seasons, but centerfire weapons and shotguns with slugs are prohibited.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Rutherford	10,000	none
Davidson	500	none

1.2. Staffing

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager I	1	0
Wildlife Technician I	1	0

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Lands Mgt. Biologist	1	Supervise Region II WMA's

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
Annual mix	quail, rabbits	0	64	64	0
wheat	doves, geese	0	35	35	0
pasture	geese	0	37	37	0
Korean lespedeza	quail, rabbit	0	101	101	0

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>	<u>Income</u>
wheat	doves	18	21	39	0
bean/millet					
hay	doves	88	5	93	\$135
soybeans	quail, rabbits	10.5	0.5	11	\$124
corn	quail, waterfowl	14	13	27	0
grain sorghum	waterfowl	0	13	13	0

2.2. Vegetation Management

Management objective of the vegetation management operation (must address a Problem and Strategy of the Strategic Plan).

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>	<u>Acres Cleared</u>
quail, rabbits	250		15	20
quail		45		
geese	222			7

2.2.1. Linear Opening Management

<u>Primary Species</u>	<u>Activity</u>	<u>Miles</u>
quail	Disc & plant fire lines	18

2.3. Forest Management---None

2.4. Water Level Management---None

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Trails and gates are maintained for hunter access.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
	gravel	3	\$419 + 3.5 MD

3.1.2. Construction

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
	Horse trails	4	6.5 MD

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Field trial parking lot	\$259 (gravel) + 3.5 MD

3.2.2. Construction

<u>Type</u>	<u>Cost</u>
Install shop heater	\$1,000
Enlarge archery range parking lot	\$210 (gravel) + 4 MD

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
10		10 mi. 2.5 MD

3.4. Equipment

Equipment consists primarily of tractors and implements.

3.4.1. Maintenance Cost---\$4,822

3.4.2. Purchase of Equipment---None

3.5. Water Control System

3.5.1. Levees

<u>Linear Feet</u>	<u>Type of Maintenance & cost</u>	<u>Construction & cost</u>
150	redress spillway with dozer	\$56 + 2 MD

3.5.2. Control Structures---None

4. DATA COLLECTION

4.1. Checking Station Operation (by species)

<u>Species</u>	<u>Man-days</u>
dove	9
deer	3

4.2. Habitat Surveys---None

4.3. Population Surveys

Type	Man-days
Goose roundup	2
Waterfowl inventory	4
Quail census	4

4.4. Other Data Collection (type and amount)

Goose collar identification 0.8 MD

5. ADMINISTRATION AND COORDINATION

Reports, meetings, season setting, purchasing, budgeting, and personnel matters were routinely handled during this report period.

6. EDUCATION

6.1. Professional Development

Law Enforcement	7 MD
Annual WMA meeting	6 MD

6.2. Hunter Education

assist with 2 courses 3.5 MD

6.3. CENTS Education---None

7. INFORMATION

Phone calls- Dissemination of information to the public.

8. RESTORATION---None

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
	Enforcement		
	Data Collection		
	Admin. & Coordination		
	Habitat Development		
	Property Main. & Dev.		
	Restoration		
	Education		
	Information		

Total

10. HUNTING SUMMARY

Problem: Productive quail habitat is being closed to hunting.

Strategy: Manage WMA's for optimum quail populations, hunter use, dog training, and field trials compatible with other species demand.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Archery	65	-	310	included in county harvest
Muzzleloader/ Archery	14	-	168	"
TOTAL	79	-	478	"

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Squirrel (Unit I)	160	160	25
(Unit II)	160	160	125
Doves (Unit I)	24	60	150
(Unit II)	60	60	300
Quail (Unit I)	80	111	25
(Unit II)	111	111	250
Rabbit (Unit I)	80	111	25
(Unit II)	111	111	250
Raccoon (Unit I)	0	102	0
(Unit II)	102	102	200

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
2450	\$52,185	\$42,347
01	30,091	22,983
02	7,242	6,139
03	6,498	3,068
05	2,154	3,531
06	1,000	840
07		253
08		202
09	3,900	4,966
11	1,300	350
2456	\$52,825	\$57,938
01	14,609	21,691
02	3,720	5,162
03	3,296	621
08		5,044
09	2,700	10,691
11	3,500	8,837
16	25,000	850
20		5,040
Total	\$105,010	\$100,285

12. LAND ACQUISITION/LEASES

License with Corps of Engineers for Unit I expires Sept. 1993.

Memorandum of Understanding for Unit II has no expiration date.

13. GENERAL COMMENTS AND DISCUSSION

Personnel assigned to Percy Priest WMA also operate and maintain Hermitage WMA. Hermitage has its own budget.

Percy Priest WMA personnel assisted in checking station operation at A.E.D.C. WMA and operated county check stations during the statewide deer season. They assisted in the quail censuses at Laurel Hill WMA. They marked boundary at Eagle Creek WMA. They routinely assist with other projects.

14. OFFICIALS

Gary Myers, Executive Director
Tennessee Wildlife Resources Agency
P.O. Box 40747
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(615) 781-6552

Barry Sumners, Lands Mgt. Biologist
Tennessee Wildlife Resources Agency
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Larry McGinn, Region II Manager
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Les Brown, Wildlife Manager
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LaVergne, TN 37086
(615) 459-2188

CATOOSA WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Catoosa W.M.A. is located in the Cumberland Plateau and mountainous physiographic region of northeastern Middle Tennessee. It is within the Region III administrative unit.

Catoosa falls within the Obed-Emory River watershed. The major tributaries that flow through the area are: Clear Creek, Daddy's Creek, Island Creek, Otter Creek and Obed River.

Catoosa and Mt. Roosevelt are the only areas in the immediate vicinity managed for public hunters. Most adjacent lands are privately-owned.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Cumberland	40,000	2,131
Morgan	40,000	2,124

1.2. Staffing

Administrative support is provided by the Region III office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	
Manager I	1	
Wildlife Technician I	5	1
Equipment Operator	1	

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	W.M.A. Supervisor
Manager III	1	Data Collection Biol.
Wildlife Officer	3	Cumberland and Morgan
Cos.		
Wildlife Enf. Supv.	1	Area 31
Asst. Wildlife	1	Area 31
Enf. Supv.		
Foresters	3	Catoosa W.M.A.

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective is to increase the quality and quantity of all wildlife habitat through an intensified wildlife management program compatible with the needs of wildlife.

The Catoosa project strategy will be to manage this wildlife management area to provide optimum deer, turkey, and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted For</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Wheat & Brown-top Millet	Dove			8
Milo and Corn	Raccoon Deer, Turkey		114	114
Korean Lespedeza, Ladino Clover, Red Clover	Quail, Deer, and Turkey			117
Wheat and Ladino Clover	Deer, Turkey			110

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Corn	Deer, Turkey Raccoon	9	3	12
Wheat	Deer, Turkey		85	85
Green Beans	Deer			100

2.2. Vegetation Management

The management objective is to increase the quality and quantity of all wildlife habitat through an intensified wildlife management program compatible with the needs of wildlife.

The Catoosa project strategy will be to manage this wildlife management area to provide optimum deer, turkey, and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Quail, deer, turkey, grouse	200	687	
Deer, turkey			114

2.2.1. Linear Opening Management - N/A

2.3. Forest Management

Activities are handled by the TWRA foresters. Information on those activities can be found in TWRA Technical Report 91-10.

2.4. Water Level Management---N/A

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
Wood (6)	Gravel	72	\$36,927.00
Concrete (1)	Trails	52	2,830.00

3.1.2. Construction - N/A

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Number</u>	<u>Cost</u>
Residence	2	
Office	1	
Shop	1	
Storage	2	
Equipment Sheds	4	
Checking Stations	4	
Garage	1	
Toilets	9	
Other	4	
Campgrounds	8	

3.2.2. Construction - N/A

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
170		51

<u>Signs</u>	<u>Number Developed</u>	<u>Number Maintained</u>
339	155	184

3.4. Equipment

Caterpillar Road Grader
 Case 995 Farm Tractor
 Case 1390 Farm Tractor
 Case 1394 Farm Tractor
 Case 585 Farm Tractor
 Ford 5000 Farm Tractor
 Ford 3000 Farm Tractor
 (4) Disc Harrows
 (4) Rotary Mowers
 (4) Flatbottom Plows
 (1) Chemical Sprayer
 T-340 International Loader

3.4.1. Maintenance Cost--- \$11,400.00

3.4.2. Purchase of Equipment

<u>Type</u>	<u>Cost</u>
Tufline Disc Harrow	\$2,409.00
Sidewinder Rotary Cutter	2,163.09

3.5. Water Control---N/A

3.6. Feeding

<u>Salt Stations</u>	<u>Developed</u>	<u>Cost</u>	<u>Maintained</u>	<u>Cost</u>
			124	\$494.10

4. DATA COLLECTION

The management objective is to increase the quality and quantity of all wildlife habitat through an intensified wildlife management program compatible with the needs of wildlife.

The Catoosa project strategy will be to manage this wildlife management area to provide optimum deer, turkey and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

4.1. Checking Station Operation

<u>Species</u>	<u>Man-days</u>
Deer	224
Turkey	162
Boar	32

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast Survey	6

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Brood Survey	3
Bag Check Survey	6
APC	9
Boar Survey	8

5. ADMINISTRATION AND COORDINATION

<u>Type</u>	<u>Man-days</u>
Catoosa WMA Forestry Management Meeting	3
Hunting Season Recommendations Meeting	8
Hunt-Checking Station Schedule	4

6. EDUCATION

6.1. Professional Development

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Law Enforcement Training	John Hamby	5.0
	Jerry Hedgecoth	5.0
Area Manager Meeting	John Hamby	2.5
	Jerry Hedgecoth	2.5
	Wayne Hedgecoth	2.5
	Tommy Waltman	2.5
	Steve Kotus	2.5
	Keith Brown	2.5
	Jerry Pugh	2.5
Retirement Meeting	Tommy Waltman	1.0
	Wayne Hedgecoth	1.0
	Keith Brown	1.0
	Steve Kotus	1.0
	Rick Moats	1.0
State Employee Meeting	Wayne Hedgecoth	1.0
	Tommy Waltman	1.0
	Keith Brown	1.0
	Cecil Stone	1.0
	Rick Moats	1.0
	Steve Kotus	1.0
	Jerry Pugh	1.0

6.2. Hunter Education---N/A

6.3. CENTS Education---N/A

7. INFORMATION

Public Requests: Answered questions regarding seasons, bag limits, places to hunt and clear cutting timber.

8. RESTORATION

Trapped 62 turkeys. The goal of the turkey project is to establish and maintain a healthy viable turkey population, to increase its distribution to all suitable sites, and to increase population levels to provide improved turkey hunting.

Problems include: Turkey populations are low or absent on suitable habitat; poor geographic distribution of huntable flocks in many areas result in low success rates which inhibit creation of increased demand; and hunter demand too great on some areas. Strategies are to manage WMA's to provide optimum turkey populations, to restock live-trapped wild birds on suitable habitat.

If this project is not performed, suitable turkey habitat will remain unoccupied and we will not have alleviated the problems addressed in the turkey program.

9. MANPOWER

Project Number	Name of Project or Activity	Man-days <u>Budgeted</u>	Man-days <u>Spent*</u>
3410	Data Collection, Surveys, Checking Stations, Buildings, Roads, Signs, Project Administration	1203	1553.0
3416	Herbaceous Planting, Plowing, Disking, Planting and Chemical Spraying	324	167.5
3418	Vegetation Manipulation, Mowing, and Burning	244	141.3
3822	Turkey Restoration, Turkey Trapping and Restocking	296	155.9
3630	Law Enforcement Training	<u>10</u>	<u>14.6</u>
TOTAL		2077	2032.3

10. HUNTING SUMMARY

The management objective is to increase the quality and quantity of all wildlife habitat through an intensified wildlife management program compatible with the needs of wildlife.

The Catoosa project strategy will be to manage this wildlife management area to provide optimum deer, turkey and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of

turkey populations for trapping and transplanting; and hunter demand too great on many areas.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer (A) E.S.	9		3750	249
Deer (M) B.O.	2		225	19
Deer (G) B.O.	2	3200	2600	139
Deer (G) B.O.	2	3200	1900	55
Deer (G) B.O.	3	3200	1100	48
Deer (G) B.O.	<u>2</u>	<u> </u>	<u>550</u>	<u>11</u>
TOTAL	20	9600	10,125	521
Boar (G,M,A) (E.S.)	20			51
Boar (Gun-Dog)	<u>3</u>	<u>200</u>	<u>180</u>	<u>16</u>
TOTAL	23	200	180	67
Turkey	18		1655	55

10.2 Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Quail	69	111	83
Rabbit	69	111	83
Dove	60	60	50
Squirrel	130	160	1500
Grouse	91	139	150
Raccoon	25	70	400
Furbearers	25	70	15

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
3410	\$353,905.00	\$256,637.00
01	107,287	145,396
02	24,064	33,444
03	23,471	11,459
05	3,083	2,337
06		64
07		60
08		458
09	32,600	59,163
10		3,629
11	7,400	
16	156,000	2,163
3411	20,000.00	251.00
01		17
02		2
09	20,000	230
3416	49,806.00	32,898.00
01	23,208	13,916
02	5,217	2,523
03	5,023	2,477
08		218
09	10,158	4,028
11	3,000	7,323
16	3,200	2,409
3418	26,333.00	14,913.00
01	16,175	10,533
02	3,636	2,171
03	3,502	1,769
08		19
09		113
11	1,020	306
16	2,000	
GRAND TOTAL	\$450,044.00	\$304,699.00

12. LAND ACQUISITION/LEASES

1652 acres of land was acquired from Mrs. Harrison and borders the Catoosa W.M.A. on the south side in Cumberland County.

13. GENERAL COMMENTS AND DISCUSSION

Budget underspent due to new equipment not purchased.

14. OFFICIALS

John Hamby, Wildlife Manager II
Catoosa Wildlife Management Area
Rt. 11, Box 94-A
Crossville, TN 38555
615-484-4094 or 615-456-2479

Reid Tatum, Region III Manager
Tennessee Wildlife Resources Agency
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Crossville, TN 38555
615-484-9571

Jim Zimmerman, Region Lands Mgmt Biol
Tennessee Wildlife Resources Agency
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615-484-9571

Gary T. Myers, Executive Director
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615-781-6552

CHICKAMAUGA/WATTS BAR WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Watts Bar W.M.A. is located on the Tennessee River near the city of Kingston. The 95-mile long Watts Bar Reservoir flows from northeast to southwest through four counties: Roane, Loudon, Rhea, and Meigs. The reservoir extends from Watts Bar Dam to Fort Loudon Dam on the Tennessee River and to Melton Hill Dam on the Clinch River. It also includes portions of the Emory and Little Emory Rivers.

Chickamauga W.M.A. is located on the Tennessee River near the city of Chattanooga. Chickamauga is at the lower segment of the Tennessee River Valley immediately downstream from Watts Bar Dam. Chickamauga lands include parts of five counties: Hamilton, Bradley, McMinn, Meigs, and Rhea. Chickamauga Reservoir is composed of two main bodies of water: the 59-mile long main channel of the Tennessee River and its major tributary, the 30-mile long Hiwassee River.

Both Watts Bar and Chickamauga Reservoirs are the only areas in the immediate vicinity managed for public hunters. Most adjacent lands are privately hunted. Most of the reservoir hunters are from surrounding counties, however, waterfowl hunts attract hunters from all over the state and out of state, especially Alabama and Georgia.

1.2. Staffing

Administrative support is provided by the Region III office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	
Manager I	1	
Technician I	4	

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	W.M.A. Supervisor
Manager III	1	Data Collection Biologist
Wildlife Officer	10	Roane, Rhea, Meigs, Hamilton, Bradley, McMinn Cos.
Wildlife Enf. Supv.	1	Area 33
Asst. Wildlife Enf. Supv.	1	Area 33

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the Chickamauga/Watts Bar units is to provide suitable habitat to increase wintering waterfowl within this area. The major species addressed by this project are geese and ducks. The major problems associated with these species are short-stopping of ducks and geese and shortage of quality wintering habitat. Strategies of this project to alleviate the problems are to establish and maintain a resident goose population and maintain productive wintering habitat for both geese and ducks throughout our refuge and wildlife management system.

Quality wintering habitat is provided through state wildlife management areas and refuges agricultural operations on natural and impounded wetlands. This will increase the numbers and overall health conditions of wintering waterfowl. Populations will increase rapidly when key areas provide quality managed habitat where disturbance is not a factor.

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted For</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Corn	Waterfowl			355
Wheat	Waterfowl			315
Milo	Waterfowl			75
Milo, Buckwheat, Millet	Waterfowl			235
Lespedeza	Waterfowl			30
Milo, Soybeans	Waterfowl			25
Vegetation	Small Game (Dove, Rabbit, Quail)			125
Total				1160

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Corn	Waterfowl	277	95	372
Wheat	Waterfowl	162	80	242
Soybeans	Waterfowl	95	32	127
Hay	Waterfowl	320	120	440
Total		854	327	1181

2.2. Vegetation Management

Vegetation management such as burning, mowing and disking play an important role in establishing, maintaining, and improving food and habitat for wintering waterfowl. Most wetlands are prone to revert to an undesirable species composition unless checked by vegetation management techniques.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Waterfowl		480	
Deer	55		

2.2.1. Linear Opening Management - N/A

2.3. Forest Management - N/A

2.4. Water Level Management

The impounding of large reservoirs near metro centers has created considerable demand for waterfowl hunting. Two major problems confront the waterfowl hunter: short-stopping and a shortage of quality wintering habitat. Flooding managed impoundments help provide quality waterfowl hunting.

2.4.1. Flooding

<u>Type of Vegetation Flooded</u>	<u>Acres Flooded</u>
Buckwheat, Millet, Milo	327
Moist Soil	60

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

Construction and maintenance of roads and bridges are necessary for managing both the land and water resources of management areas for management personnel access as well as public hunters.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
Wood/Cable (2)	Gravel(Type II)	6	\$4,500.00

3.1.2. Construction - N/A

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Cost</u>
Residence	As Needed
Office	"
Shop	"
Equipment Buildings	"
Grounds	"

3.2.2. Construction - N/A

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>	<u>Total Wildlife Management Areas</u>	<u>Total Wildlife Management Acres</u>
			Chickamauga (23 Units)	4,500
			Watts Bar (12 Units)	3,680

3.4. Equipment

Below is a list of the major equipment essential to the Chickamauga/Watts Bar waterfowl management program:

TD-9 International Dozer
7 Farm Tractors
3 Outboard Motor Boats
1 Ferry Tugboat and Barge
1 Diesel Power Unit Pump

3.4.1. Maintenance Cost--- \$8,433.00

3.4.2. Purchase of Equipment

\$ 7,623.00 - Rotary Mowers
\$33,054.00 - John Deere Farm Tractor

3.5. Water Control

3.5.1. Levees

<u>Linear Feet</u>	<u>Type of Maintenance & cost</u>	<u>Construction & cost</u>
26,600'	Routine - \$1,000.00	
400'		

3.5.2. Control Structures

<u>Maintenance (cost and #)</u>	<u>Construction (cost and #)</u>
\$400.00 - 12	

3.6. Feeding - N/A

4. DATA COLLECTION

Data collection is necessary to assure that we are accomplishing our objective of providing quality habitat for resident migratory and wintering waterfowl.

4.1. Checking Station Operation

<u>Species</u>	<u>Man-days</u>
Deer	10
Dove	12

4.2. Habitat Surveys - N/A

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Goose Nest Survey	30
Wood Duck Banding	30
Osprey Nesting	8
Sandhill Crane Survey	4
Eagle Survey	5
Bag Check	2
Goose Banding	12
Osprey Banding	5

4.4. Other Data Collection - N/A

5. ADMINISTRATION AND COORDINATION

Meetings are required to maintain a continuous coordination of TWRA administration functions with area management activities. Some of the administrative activities include reports, personnel, record management, law or regulation changes, purchasing, sharecropping contracts, cooperative agreements and coordinating with TVA on resource projects.

<u>Type</u>	<u>Man-days</u>
Management Planning, Coordination, Evaluation	15
Cooperative Agreements	32

6. EDUCATION

6.1. Professional Development

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Law Enforcement Training	2 - Manageres	11.8
Area Manager Meeting	1 - Manager	3.0
	4 - Technicians	8.0
Employee Relations Class		2 Days

6.2. Hunter Education---N/A

6.3. CENTS Education---N/A

7. INFORMATION

Public Requests: Answered questions concerning areas to hunt, access, seasons, bag limits and regulations.

8. RESTORATION---N/A

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
3436	Planting, Plowing, Disking, Spraying	360	176.8
3438	Mowing, Burning	48	20.3
3437	Water Management, Dikes, Levees	84	51.3
3430	Data Collection, Surveys, Roads, Signs, Checking Stations, Equip- ment Maintenance, Project Admini- stration	938	1072.7
Total		1430	1321.1

10. HUNTING SUMMARY

There is a need on Chickamauga for 12,500+ trips of waterfowl hunting, 15,000+ trips for small game and furbearers hunting, and 4,000+ trips for deer hunting. There is a need on Watts Bar for 3,500+ trips of deer hunting, 10,000+ mandays of waterfowl hunting, and 9,000+ trips of small game and furbearers hunting. The objective is to develop, manage, and maintain a wildlife program in cooperation with TVA to meet these needs.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Man-Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer	7,250		1,000+	148

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Man-Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Ducks	22,500	30	2,500
Geese	5,000	70	1,000
Quail	3,000	109	500
Rabbit	3,000	109	500
Squirrel	6,000	129	1,000
Dove	3,000	60	1,500
Furbearers	5,000	71	700

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
3430	\$133,656	\$164,920.61
01	84,270	93,600
02	18,966	20,328
03	17,313	6,120
04	2,150	2,513
06		283
07		463
08	5,757	7,229
09	3,900	25,669
10		1,394
11	1,300	7,247
3436	91,953	50,936.71
3437	11,142	5,037.69
3438	7,646	1,749.25
Total	\$244,397	\$222,644.66

12. LAND ACQUISITION/LEASES - N/A

13. GENERAL COMMENTS AND DISCUSSION

Budget underspent due to vacant position and new equipment not purchased.

14. OFFICIALS

Carl Campbell, Wildlife Manager II
Blythe Ferry Wildlife Management Area
Rt. 1, Box 95-A
Birchwood, TN 37308
615-339-2161

Reid Tatum, Region III Manager
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216 E. Penfield Street
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615-484-9571

Dan Lavacot, Wildlife Manager I
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Gary T. Myers, Executive Director
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Jim Zimmerman, Lands Mgmt Biologist
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615-484-9571

CORDELL HULL WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Cordell Hull W.M.A. is located in the northeast portion of the Highland Rim physiographic region of northeastern Middle Tennessee, northwest of the Cumberland Plateau. It is within the Region III administrative unit.

Cordell Hull W.M.A. falls within the Cumberland River watershed. The northeastern portion of the Cumberland River flows through the W.M.A. forming Cordell Hull Reservoir. The major tributaries of the Cumberland River that flow through the area are Roaring River, Sugar Creek, Wartrace Creek, Jennings Creek, Flynns Lick Creek, Salt Lick Creek, Martin Creek, Indian Creek, Buffalo Creek and Defeated Creek.

Cordell Hull W.M.A. is the only area in the immediate vicinity managed for public hunters. Majority of adjacent lands are privately owned.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Jackson	15,100	
Smith	7,300	
Cordell Hull Reservoir	12,000 surface acres	

1.2. Staffing

Administrative support is provided by the Region III office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	W.M.A. Supervisor
Manager III	1	Data Collection Biol.
Wildlife Officer	2	Jackson and Smith Cos.
Wildlife Enf. Supv.	2	Area 31, Area 21
Asst. Wildlife Enf. Supv.	2	Area 31, Area 21
Wildlife Biologist II	2	Small Game & End Species Biologist

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation is to increase the quality and quantity of all wildlife habitat through direct and indirect management practices that may include contracts, sharecrop agreements with local farmers, or other agricultural agreements with private organizations or clubs, and herbaceous plantings by management staff.

The Cordell Hull project strategy will be to manage this wildlife management area to improve the habitat to an optimum level possible to maintain and provide the maximum number of animals per minimum number of acres possible to meet the needs and projected increased needs in the future of the W.M.A. The major species addressed by this project are: deer, waterfowl, quail, and rabbits.

Management strategy to provide optimum habitat should help alleviate the following problems: Lands are being closed to hunting for a number of reasons; some hunters do not have a place to hunt; shortage of quality wintering waterfowl habitat; loss of local wetlands; many land use practices and/or trends are having adverse effects on quail and rabbit habitat; productive quail and rabbit habitat is being closed to hunting.

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted For</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Winter Wheat	Waterfowl, Deer Small Game	0	15	15
Kobe Lespedeza	Small Game (Burn Areas)	0	185	185
Total			200	200

2.1.2. Agricultural Leases

<u>Crop</u>	<u>Primary Species Planted for</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Corn	Deer, Waterfowl	186.06	62.02	248.08
Wheat	Deer, Waterfowl	99.49	33.16	132.65
Soybeans	Deer, Waterfowl, Small Game, Dove	35.25	11.75	47.00
Green Beans	Deer, Waterfowl	144.00	144.00	144.00
Winter Wheat	(Beans)	(Wheat)		
Millet	Deer, Waterfowl, Small Game, Dove	11.24	3.76	15.00
Oats	Deer, Waterfowl, Small Game, Dove	85.13	28.37	113.50
Capricorn	Deer, Waterfowl, Small Game	0	3.00	3.00
Korean Lespedeza	Deer, Small Game, Dove	13.50	1.50	15.00
Millet/Soybeans	Deer, Waterfowl, Small Game, Dove	81.00	27.00	108.00
Alfalfa	Deer, Waterfowl, Small Game, Dove	19.00	19.00	19.00
Pasture (Goose)	Deer, Waterfowl	170.55	18.95	189.50
Total		845.22	352.51	1034.73

2.2. Vegetation Management

The management objective is to increase the quality and quantity of all wildlife habitat through direct and indirect management programs compatible with the needs of wildlife.

The Cordell Hull project strategy will be to manage this wildlife management area to provide optimum deer, waterfowl, and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; shortage of quality wintering waterfowl habitat; loss of local wetlands; many land use practices and/or trends are having adverse effects on quail and rabbit habitat; productive quail and rabbit habitat is being closed to hunting.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Small Game, and deer	650	0	0

2.2.1. Linear Opening Management - N/A

2.3. Forest Management

Activities are handled by the U. S. Army Corps of Engineers.

2.4. Water Level Management---N/A

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management - N/A

3.2 Buildings and Grounds - N/A

3.3. Boundaries

250

15

3.4. Equipment

Boat, Shaffer Aluminum Flatbottom
Johnson, 120 h.p. Outboard Motor

3.4.1. Maintenance Cost--- \$1,530.00

3.4.2. Purchase of Equipment---N/A

3.5. Water Control---N/A

3.6. Feeding - N/A

4. DATA COLLECTION

The management objective is to increase the quality and quantity of all wildlife habitat through direct and indirect wildlife management programs compatible with the needs of wildlife.

The Cordell Hull project strategy will be to manage this wildlife management area to provide optimum deer, waterfowl, and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; shortage of quality wintering waterfowl habitat; loss of local wetlands; many land use practices and/or trends are having adverse effects on quail and rabbit habitat; productive quail and rabbit habitat is being closed to hunting.

4.1. Checking Station Operation (by species) - N/A

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast Survey	1

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Goose/Gosling Survey	1.0
Bag Check Survey	17.4
Waterfowl Counts	6.6
Waterfowl Blind Drawing	2.8
Goose Neck Collar Observations	6.5

5. ADMINISTRATION AND COORDINATION

<u>Type</u>	<u>Man-days</u>
Meetings (U. S. Army Corps of Engineers)	15.8
Animal Damage Control, Quail Unlimited, Staff Meeting, DOT Bridge Construction	
Office Duties, Reports, Mapping	30.5
Waterfowl Blind Permits and Drawing	2.8
Purchasing (Supplies, Materials, Equipment)	3.6
Sick, Wounded, or Dead Wildlife	1.0
Management Planning, Coordination	0.9
Budget	1.2

6. EDUCATION

6.1. Professional Development

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Law Enforcement Training	Gary Black	7.3
Area Manager Meeting	Gary Black	3.1
Controlled Burn Workshop	Gary Black	6.1
Wildlife Society Meeting	Gary Black	2.0
Eagle Management Meeting	Gary Black	1.5

6.2. Hunter Education

<u>Type</u>	<u>Mandays</u>
Live Firing	1

6.3. CENTS Education---N/A

7. INFORMATION

<u>Type</u>	<u>Man-Days</u>
U. S. Army Corps of Engineers Information Workshop	2
WMA Information Meeting (Jackson County)	1

8. RESTORATION---N/A

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent*</u>
3470	Data Collection, Surveys, Signs, Boundarys, Project Administration		82.0
	Herbaceous Planting, Plowing, Disking, Agricultural Leasing, Site Inspection		91.2
	Vegetation Manipulation, Mowing, and Burning		10.4
	Law Enforcement & Training		41.9
	Information/PR Info. Requests		20.9
	Equipment Maintenance		5.9
2456	Percy Priest WMA Planting		2.9
3420	Prentice Cooper Data Collection		4.7
Total			259.9

10. HUNTING SUMMARY

The management objective is to increase the quality and quantity of all wildlife habitat through direct and indirect wildlife management programs compatible with the needs of wildlife.

The Cordell Hull project strategy will be to manage this wildlife management area to provide optimum deer, waterfowl, and small game populations to alleviate the following problems: Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; shortage of quality wintering waterfowl habitat; loss of local wetlands; many land use practices and/or trends are having adverse effects on quail and rabbit habitat; productive quail and rabbit habitat is being closed to hunting.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Trips</u>	<u>Harvest</u>
Deer (A) E.S.	Statewide	N/A			
Deer (M) B.O.	"	"			
Deer (G) B.O.	"	"			
Deer (M) E.S.	"	"			
Total			5,000	45,000	800

10.2 Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Trips	Estimated Total Hunters	Harvest
Ducks	30	30	5,000	200	1,500
Geese	54	54		300	
Squirrel	159	159		300	
Grouse	138	138		0	
Rabbit	110	110		150	
Quail	110	110	5,000	150	7,500
Raccoon/Opossum					
Hunting	101	101		125	
Trapping	31	31		25	
Woodcock	65	65		25	
Snipe	107	107		25	
Dove	60	60		200	
Furbearers	91	91	200	50	100
Fishing			25,000		
Non-Consumptive			25,000		

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
3470	\$39,597.00	\$34,462.36

12. LAND ACQUISITION/LEASES

DACW62-3 89-01 - Lease with U. S. Army Corps of Engineers and TWRA to form Cordell Hull WMA.

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

Gary Black, Wildlife Manager II
Cordell Hull Wildlife Mgmt Area
Rt. 1, Box 342
Granville, TN 38564
615-858-2995

Reid Tatum, Region III Manager
Tennessee Wildlife Resources Agency
216 E. Penfield Street
Crossville, TN 38555
615-484-9571

Jim Zimmerman, Lands Mgmt Biologist
Tennessee Wildlife Resources Agency
216 E. Penfield Street
Crossville, TN 38555
615-484-9571

Gary T. Myers, Executive Director
Tennessee Wildlife Resources Agency
P. O. Box 40747
Nashville, TN 37204
615-781-6552

OAK RIDGE WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

The Oak Ridge WMA is located between the Appalachian Mountains and the Cumberland Plateau in the hill and valley physiographic region of East Tennessee. It is located in Anderson and Roane Counties and therefore falls within both Region III and IV administration units. The program is coordinated through Region III. The entire WMA lies within the city limit boundaries of Oak Ridge, Tennessee.

The majority of the lands of the Oak Ridge WMA (35,200 acres) are owned by the United States Department of Energy and the wildlife management program is managed under a five (5) year cooperative agreement with the TWRA. Additional lands are included in the Oak Ridge WMA program under annual cooperative agreements with TVA for the former Clinch River Breeder Reactor Program site (1,500 acres), the University of Tennessee for the Oak Ridge Forestry Experiment Station (2,260 acres) and the City of Oak Ridge for Haw Ridge Park (770 acres).

The WMA is characterized by a series of parallel ridges and valleys running northeast to southwest. These ridges and valleys are bound on the east, south, and west by the Clinch River (Melton Hill and Watts Bar Reservoirs and its northern boundary runs along Black Oak Ridge and Midway Turnpike Road at the base of Pine Ridge.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Anderson/Roane	39,730	0

1.2. Staffing

Administrative support is provided by the Region III office and various Region IV and central office division personnel.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	W.M.A. Supervisor
Manager III	2	Regions 3 (1) & 4 (1)
Wildlife Officer	4	Roane (2) & Anderson (2)
Wildlife Enf. Supv.	2	Areas 33 (1) & 41 (1)
Wildlife Officer II	2	Areas 33 (1) & 41 (1)
Biologist III	3	Statewide
Manager IV	1	Regional

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation - N/A

2.2. Vegetation Management - N/A

2.3. Forest Management

Forest management is conducted by Martin-Marietta Energy Systems for D.O.E.

2.4. Water Level Management - N/A

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management - N/A

3.2. Buildings and Grounds - N/A

3.3. Boundaries

Estimated
Total
Boundary

Miles
Established
and Cost

Miles
Maintained
and Cost

56

As Needed

3.4. Equipment - N/A

3.5. Water Control - N/A

4. DATA COLLECTION

Data collection operations include operation of a deer checking station, annual wild turkey brood survey, annual Canada goose roundup, banding, neck collar with bimonthly collar observation September through March, waterfowl census, wood duck banding, Canada goose checking station, deer collections for APC, osprey banding, deer population modeling, and hard mast survey.

4.1. Checking Station Operation

Oak Ridge WMA deer checking station is operated three (3) days annually to provide information to hunters on pre-hunt scouting days and to check out deer on six (6) hunting days. Same checking station is used two (2) to three (3) days annually to check out Canada geese for the opening weekends of the Upper Middle East Tennessee and Watts Bar units.

Species

Man-days

Deer, Geese

20

4.2. Habitat Surveys

Type

Man-days

Mast Survey

1

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Osprey Banding	2
Turkey Brood Survey	10
Wood Duck Banding	10
Canada Goose Roundup, Banding, Neck Collar Observations	25
APC	1
Modeling	1

4.4. Other Data Collection

<u>Type</u>	<u>Man-days</u>
Monitoring and Control of Wildlife Contaminated with Radiation and Other Pollutants	10

5. ADMINISTRATION AND COORDINATION - N/A

6. EDUCATION

6.1. Professional Development

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Law Enforcement Training	Manager II	6.0
Area Manager Meeting	Manager II	3.0

6.2. Hunter Education

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Wildlife Management and Identification	Manager II	1.0
Gun, Hunting, and Outdoor Safety Lectures at three (3) Oak Ridge plant sites (Y-12, K-25, and ORNL)	Manager II	2.0

6.3. CENTS Education - N/A

7. INFORMATION

Public request for information on hunting, fishing, outdoors, and radiation contamination.

8. RESTORATION

Twenty-one (21) turkeys trapped for restoration units in Anderson, McMinn, and Rhea Counties.

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent</u>
3440	Deer: Data Collection, Modeling/APC, Enforcement, Checking Station, Road Kill Pickup/Reports, Administration and Coordination, Quota Hunts		168.0
	Turkey: Brood Survey, Trapping/Restoration		15.0
	Waterfowl: Goose Roundup Banding, Neck Collar and Bimonthly Observation, Wood Duck Banding, Waterfowl Census, Contamination Monitoring		40.0
	In-service: Law Enforcement, WMA		10.0
	Osprey: Nest Structure/Banding		2.0
	Environmental Development: Environmental Concerns, Fish Kills, Pollution Monitoring, Wildlife Complaints, Sick, Wounded, or Dead Wildlife, Cooperation with Research		5.0
Total			240.0

10. HUNTING SUMMARY

The primary purpose of having deer hunts on the Oak Ridge WMA is to reduce the deer population in Oak Ridge to hopefully reduce the number of deer/vehicle collisions on the local highways and roads. Thus far, the hunts have been successful in reducing the deer population and the number of collisions. The number of road kills has been reduced from a high of 273 in 1985 when hunts were initiated to 147 in 1990. Deer are the only animals currently being hunted on the Oak Ridge WMA.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer	6	3850	2940	441

10.2. Small Game - N/A

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
3440	\$52,387.00	

12. LAND ACQUISITION/LEASES - N/A

13. GENERAL COMMENTS AND DISCUSSION

14. OFFICIALS

James Evans, Wildlife Manager II
106 Cavetton Road, #1B
Knoxville, TN 37923
615-574-8204

Dick Hurd, Data Collection Biologist
Tennessee Wildlife Resources Agency
216 E. Penfield Street
Crossville, TN 38555
615-484-9571

Reid Tatum, Region III Manager
Tennessee Wildlife Resources Agency
216 E. Penfield Street
Crossville, TN 38555
615-484-9571

Gary T. Myers, Executive Director
Tennessee Wildlife Resources Agency
P. O. Box 40747
Nashville, TN 37204
615-781-6552

PRENTICE COOPER WILDLIFE MANAGEMENT AREA

1. INTRODUCTION

1.1. Description of Area

Prentice Cooper W.M.A. is located on the Cumberland Plateau, and is within the Region III administrative unit. The area is approximately 10 miles northwest of Chattanooga, Tennessee off Hwy. 27.

<u>County</u>	<u>Acres</u>	<u>Acres of Inholdings</u>
Marion	26,800	150

1.2. Staffing

Administrative support is provided by the Region III office and various central office divisions.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Manager II	1	
Technician I	1	

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Manager III	1	W.M.A. Supervisor
Manager III	1	Data Collection Biol.
Wildlife Officer	2	Marion County
Wildlife Enf. Supv.	1	Area 32
Asst. Wildlife	1	Area 32
Enf. Supv.		

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of this agricultural operation is to manage this WMA to provide optimum deer, turkey, and small game populations to alleviate the following problems:

Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

The Prentice Cooper project strategy will be to seek to establish optimum seasons on state and federal lands.

TWRA WILDLIFE MANAGEMENT AREAS AND REFUGES

Region	Area Name	Date Est.	Ownership	County	WMA Acres	Refuge Acres	Total Acres
I	Anderson-Tully	1955	Private	Lauderdale	12,493		12,493
I	Bards Creek Ref	1966	USTVA	Stewart		870	870
I	Barkley	1966	USCOE	Stewart	7,753		7,753
I	Bean Switch Ref	1991	TWRA	Weakley		554	554
I	Big Sandy	1956	USTVA	Benton	1,562		1,562
				Henry			
I	Black Bayou Ref	1992	TWRA	Lake			0
I	Camden	1956	USTVA	Benton	3,562		3,562
I	Chickasaw	1954	TDF	Hardeman	14,187		14,187
				Chester			
I	Ernest Rice, Sr.	1990	TWRA	Dyer	2,121		2,121
I	Gooch	1961	TWRA	Obion	6,458	200	6,658
I	Harmons Creek	1956	USTVA	Benton	408		408
I	Hop-In Ref	1991	TWRA	Obion		682	682
I	Horns Bluff Ref	1992	TWRA	Crockett			0
				Gibson			
I	Jarrell Switch Ref	1992	TWRA	Carroll			
I	Lauderdale Ref	1987	TWRA	Lauderdale		652	652
I	LBL	1968	USTVA	Stewart	63,000		63,000
I	Lick Creek	1962	USTVA	Benton	61		61
I	Maness Ref	1991	TWRA	Weakley		2,312	2,312
I	Moss Island (1)	1959	TWRA	Dyer	3,357		3,357
I	Mustin Bottoms Ref	1992	TWRA	Shelby			0
I	Natchez Trace	1957	TDF	Henderson	26,000		26,000
				Carroll	22,000		
				Benton			
I	New Hope	1962	USTVA	Benton	92		92
I	N.B. Forrest	1975	TDEC	Benton	3,318		3,318
I	Obion River	1991	TWRA	Obion	8,288		8,288
				Weakley			
				Gibson			
I	Perryville	1956	USTVA	Decatur	149		149
I	Reelfoot Lake	1951	TWRA	Lake	24,000		24,000
				Obion			
I	Shelby Forest	1964	TDOC	Shelby	12,000		12,000
I	Tigrett	1958	TWRA	Dyer	4,110		4,110
I	West Sandy	1956	USTVA	Henry	3,638		3,638
I	White Lake Ref	1990	TWRA	Dyer		938	938
I	White Oak	1985	TWRA	Hardin	5,744		5,744
	Region I Total				224,301	6,208	208,509
II	AEDC	1954	USAF	Coffee	37,181		37,181
				Franklin			
II	Bordeaux Heron Ref	1979	TWRA	Davidson		6	6
II	Camp Boxwell Ref	1955	Private	Wilson		1,133	1,133
II	Cedar Hill Swamp	1988	TWRA	Robertson	166		166
II	Cheatham	1939	TWRA	Cheatham	19,888		19,888
II	Cheatham Res.	1961	USCOE	Cheatham	4,102	450	4,552
II	Cumberland Spgs	1975	Private	Moore	7,008		7,008
II	Dyson Ditch Ref	1966	USCOE	Cheatham		450	450
II	Eagle Creek (5)	1989	Private	Wayne	22,000		22,000
II	E.A.C. Ref	1969	TWRA	Davidson		207	207
II	Flintville	1976	TWRA	Lincoln	750		750
II	F.O.P. Refuge	1971	Private	Wilson		38	38
II	Gallatin Steam Plt	1974	USTVA	Sumner	1,607		1,607
II	Haley-Jaqueth	1991	TWRA	Williamson	232		232
II	Hermitage	1972	TDEC	Davidson	787		787
II	Laurel Hill	1959	TWRA	Lawrence	15,939		15,939
				Lewis			
II	Lock 5 Refuge	1956	USCOE	Wilson		880	880
II	MTSU	1982	MTSU	Hickman	302		302
II	Normandy	1977	USTVA	Coffee	2,127		2,127
II	Old Hickory Res	1959	USCOE	Sumner	3,478		3,478
				Wilson			
				Trousdale			
II	Pardue Pond Ref	1959	USCOE	Dickson		450	450
II	Percy Priest (2)	1968	USCOE	Davidson	14,000		14,000
				Rutherford			
				Wilson			
II	Woods Res. Ref	1961	USDOD	Franklin		1,900	1,900
	Region II Total				129,567	5,514	135,081

TWRA WILDLIFE MANAGEMENT AREAS AND REFUGES

Region	Area Name	Date Est.	Ownership	County	WMA Acres	Refuge Acres	Total Acres
III	Amnicola Ref	1986	USTVA	Hamilton		50	50
III	Catoosa	1942	TWRA	Cumberland	77,190		77,190
III	Chickamauga (4)	1988	USTVA	Morgan			
				Bradley	12,574		12,574
				Hamilton			
				McMinn			
				Meigs			
				Rhea			
III	Cordell Hull	1988	USCOE	Jackson	25,000		25,000
				Smith			
III	Cordell Hull Ref	1973	USCOE	Jackson		600	600
III	Fall Creek Falls	1952	TDEC	Bledsoe	9,423		9,423
				Van Buren			
III	Hiwassee Refuge	1955	USTVA	Meigs		6,813	6,813
				Rhea			
III	Kingston Refuge	1962	USTVA	Roane		431	431
III	Mt. Roosevelt	1979	TWRA	Cumberland	9,388		9,388
				Morgan			
				Roane			
III	Nickajack Cave Ref	1992		Marion			0
III	Oak Ridge	1989	USDOE	Anderson	35,282		35,282
				Roane			
III	Paint Rock Refuge	1955	USTVA	Roane		1,076	1,076
III	Pickett	1954	TDF	Pickett	9,886		9,886
III	Prentice Cooper	1947	TDF	Marion	26,266		26,266
III	Standing Stone	1954	TDEC	Overton	8,007		8,007
III	Volunteer AAP	1975	USDOD	Hamilton	7,340		7,340
III	Watts Bar (4)	1988	USTVA	Roane	5,480		5,480
	Region III Total				227,995	8,970	236,965
IV	Bat Creek Ref	1990	USTVA	Loudon		625	625
				Monroe			
IV	Buffalo Spgs	1981	TWRA	Grainger	333		333
IV	Cherokee For. (3)	1971	USFS	Blount	613,037		613,037
				Carter			
				Cocke			
				Greene			
				Johnson			
				Monroe			
				Polk			
				Sullivan			
				Unicoi			
				Washington			
IV	Chilhowee Mtn	1982	Private	Blount	6,000		6,000
				Sevier			
IV	Chuck Swan	1952	TDF	Union	24,887		24,887
				Campbell			
IV	Cove Creek	1954		Campbell	2,555		2,555
IV	Cove Mtn	1987	Private	Sevier	1,220		1,220
IV	Doe Mtn.	1979	Private	Johnson	14,846		14,846
IV	Eastern State	1974	TF&A	Knox	371		371
IV	Henderson Isl Ref	1958	USTVA	Jefferson		686	686
IV	Heron Island Ref	1980		Hamblen		50	50
IV	Holston River Ref	1990	USTVA	Hawkins		125	125
				Sullivan			
IV	Nolichucky	1973	USTVA	Greene	2,127		2,127
IV	Phipps Bend Ref	1988	USTVA	Hawkins		1,200	1,200
IV	Rankin	1983	USTVA	Cocke	1,600		1,600
IV	Royal Blue	1991	TWRA	Campbell	46,376		46,376
				Scott			
IV	Tellico Lake	1985	USTVA	Monroe	6,000		6,000
IV	Tellico Lake Ref	1985	USTVA	Monroe		79	79
	Region IV Total				719,352	2,765	722,117
	Statewide Total				1,301,215	23,457	1,302,672

- (1) Changed to a WMA in 1977
- (2) Unit II added in 1977
- (3) Several units proclaimed at various times from 1937 to the present
- (4) First proclaimed as individual

2.1.1 Force Account

<u>Crop</u>	<u>Primary Species Planted For</u>	<u>Acres Harvested</u>	<u>Acres Remaining</u>	<u>Total Acres</u>
Milo	Deer, Turkey		18 Plots (6.0 ac.)	6.0
Wheat	Deer, Turkey		33 Plots (14.0 ac.)	14.0
Ladino Clover	Deer, Turkey		33 Plots (14.0 ac.)	14.0
Vegetation	Deer, Turkey Small Game		86.0 ac.	80.2
Total				120.0

2.1.2. Agricultural Leases - N/A

2.2. Vegetation Management

The management objective of this agricultural operation is to manage this WMA to provide optimum deer, turkey, and small game populations to alleviate the following problems:

Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

The Prentice Cooper project strategy will be to seek to establish optimum seasons on state and federal lands.

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disked</u>
Quail, deer, and turkey		200	

2.2.1. Linear Opening Management

<u>Primary Species</u>	<u>Activity</u>	<u>Miles</u>
Deer, Turkey	Mowed	4

2.3. Forest Management

Responsibility of Division of Forestry (TN Dept. of Conservation).

2.4. Water Level Management---N/A

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management---N/A

3.2. Buildings and Grounds

3.2.1. Maintenance

<u>Type</u>	<u>Number</u>	<u>Cost</u>
Residence	2	
Workshop	1	
Storage	2	
Checking Station	1	

3.2.2. Construction - N/A

3.3. Boundaries

<u>Estimated Total Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
45		45

3.4. Equipment

On this WMA we maintain two farm tractors with the following implements: 2 rotary mowers, 1 tiller, 1 front-end loader, 1 disc type plow, 1 spreader, 1 grain drill, and 1 2-row disc.

3.4.1. Maintenance Cost--- \$1,100.00

3.4.2. Purchase of Equipment---None

4. DATA COLLECTION

The management objective of this operation is to manage this WMA to provide optimum deer, turkey, and small game populations to alleviate the following problems:

Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

The Prentice Cooper project strategy will be to seek to establish optimum seasons on state and federal lands.

4.1. Checking Station Operation

<u>Species</u>	<u>Man-days</u>
Deer	42
Turkey	24

4.2. Habitat Surveys

<u>Type</u>	<u>Man-days</u>
Mast Survey	2

4.3. Population Surveys

<u>Type</u>	<u>Man-days</u>
Brood Survey	2

5. ADMINISTRATION AND COORDINATION

During this report period a property inventory was completed. Planning between the Lands Management Biologist, Wildlife Manager, Technician regarding farming practices, time allocated for check stations, budgeting, and season recommendations took place during this report period. Also employee evaluations and interim reviews were completed.

6. EDUCATION

6.1. Professional Development

<u>Type</u>	<u>Personnel</u>	<u>Man-days</u>
Law Enforcement Training	Steve Foster	6.0
	Dan Lavacot	6.0
Area Manager Meeting	Steve Foster	3.0
	Dan Lavacot	3.0

6.2. Hunter Education---N/A

6.3. CENTS Education---N/A

7. INFORMATION - N/A

8. RESTORATION

The employees of this WMA are assigned to perform turkey restoration activities on the Volunteer Army Ammunition Plant WMA. During this report period 30 mandays were used trying to locate and bait turkeys on this WMA with no success.

9. MANPOWER

<u>Project Number</u>	<u>Name of Project or Activity</u>	<u>Man-days Budgeted</u>	<u>Man-days Spent</u>
3420	Data Collection, Enforcement, Administration, and Coordination	361	273.5
3426	Habitat Development	40	30.5
3428	Property Maintenance and Development	36	12.9
3822	Turkey Restoration	50	30.0
3630	Law Enforcement Training	12	12.0
Total		499	358.9

10. HUNTING SUMMARY

The management objective of this operation is to manage this WMA to provide optimum deer, turkey, and small game populations to alleviate the following problems:

Lands are being closed to hunting for many reasons; hunters do not have a place to hunt; turkey populations are low or absent on suitable habitat; shortage of turkey populations for trapping and transplanting; and hunter demand too great on many areas.

The Prentice Cooper project strategy will be to seek to establish optimum seasons on state and federal lands.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer (A) E.S.	9		1360	76
Deer (G) B.O.	<u>8</u>		<u>700</u>	<u>51</u>
TOTAL	17		2060	127
Turkey	12		57	1

10.2. Small Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Quail	30	110	20
Rabbit	30	110	5
Dove	32	60	5
Squirrel	107	153	100
Grouse	74	138	5
Fox	69	91	5
Raccoon	8	31	75
Bobcat	69	91	5
Coyote	114	365	5

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
3420	\$56,085.00	\$53,503.00
3426	11,187.00	5,469.00
3428	<u>5,007.00</u>	<u>1,819.00</u>
Total	\$72,279.00	\$60,791.00

12. LAND ACQUISITION/LEASES---N/A

13. GENERAL COMMENTS AND DISCUSSION

Budget underspent due to vacant position and medical absence of Area Manager.

14. OFFICIALS

Steve Foster, Wildlife Manager II
Prentice Cooper Wildlife Mgmt Area
Rt. 5
North Chattanooga, TN 37405
615-658-9802

Reid Tatum, Region III Manager
Tennessee Wildlife Resources Agency
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615-484-9571

Jim Zimmerman, Lands Mgmt Biol
Tennessee Wildlife Resources Agency
216 E. Penfield Street
Crossville, TN 38555
615-484-9571

Gary T. Myers, Executive Director
Tennessee Wildlife Resources Agency
P. O. Box 40747
Nashville, TN 37204
615-781-6552

CHEROKEE WILDLIFE MANAGEMENT AREA

1.1 Introduction

1.1 Description of Area

The Cherokee WMA is located in the extreme East Tennessee along the North Carolina border. It is located in 10 separate counties. The area consists of 650,000 acres in Johnson, Carter, Sullivan, Unicoi, Washington, Greene, Cocke, Monroe, Polk, and McMinn counties. The U.S. Forest Service owns approximately 630,000 acres of the land while TWRA either owns or leases the remaining 20,000 acres.

1.2 Staffing - No full time staff.

2.1 The management objective of the area is to provide quality wildlife populations on the area while maintaining population security.

2.1.1 Force Account

<u>Crop</u>	<u>Average Planted For</u>	<u>Average Harvested</u>	<u>Total Remaining</u>	<u>Acres</u>
Clover, Orchard- grass	Deer, Turkey	0		143
Corn-Milo	Quail, Rabbit Ducks			9
Small Game Mixture	Quail			12

2.1.2 Agricultural Leases - None

2.2 Vegetation Management

<u>Primary Species</u>	<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Disced</u>
Deer-Turkey		630	
Deer-Turkey		14	

2.3 Forest Management

The forest management is performed by the U.S. Forest Service. TWRA is asked to comment on all prescriptions.

2.4 Not applicable.

3.1 Access management is primarily controlled by the U.S. Forest Service. The TWRA presently maintains two gates on TWRA owned lands.

3.1.1 Maintenance

2 gates - TWRA
30 gates - USFS

3.1.2 Construction

No new gates constructed this year.

3.3 Boundaries

Boundaries maintained by the U.S. Forest Service.

3.4 No equipment is assigned to the area.

4. Data Collection

Data collection on the area is covered in other budgets.

5. Administration and Coordination

The area is administered to maximize TWRA input into USFS operations to allow for the proper management of wildlife populations on the area.

6. Education

Covered in other budgets.

7. Information

Covered in other budgets.

8. Restoration

Covered in other budgets.

9. Manpower

<u>Project Number</u>	<u>Activity</u>	<u>Man Days Spent</u>
4410	Administration & Coordination	35*
	Habitat Development	5*

* estimates except for total

10.1 Hunting Summary (North Cherokee)

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Parties</u>	<u>Harvest</u>
Deer	43	NQ		Unknown
Turkey	37	NQ		Unknown
Bear	14	NQ		Unknown
Boar	0	NQ		Unknown

10.2 Small Game---Information not available.

11. Expenditures

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
4410		
4401	\$15,552	\$ 5,658
4402	3,372	1,201
4403	4,486	1,571
4408	80,000	75,168
4409	1,500	733
4410	10,000	10,000
4411	875	10
4414	<u>0</u>	<u>6</u>
 Total	 \$115,785	 \$ 94,364

12. Not applicable.

13. This area is very important to East Tennessee due to the large amount of public hunting offered. Our best attempt to provide quality hunting here is needed.

CHUCK SWAN WILDLIFE MANAGEMENT AREA

- 1.1 Located in the East Tennessee Ridge and Valley section of East Tennessee between the Clinch and Powel Rivers. it lies in Union and Campbell counties within the Region IV Administration unit.

Union	20,000 acres
Campbell	5,000 acres

1.2 Staff

<u>Position</u>	<u>Employment</u>
Wildlife Manager II	1 - full time
Equipment Operator	1 - full time
Wildlife Technician	1 - full time

2. Habitat Development

2.1 Agricultural Operations

2.1.1 Force Account

<u>Crop</u>	<u>Planted For</u>	<u>Total Acres</u>
Corn	Deer-Turkey-Raccoon	25 acres
Milo	Deer-Turkey-Small Game	50 acres
Clover/Grass	Deer-Turkey-Small Game	60 acres
Lespedeza	Quail-Rabbit	35 acres
Wheat	Deer-Turkey-Dove	9 acres
Game Food Mix	All Game Species	10 acres

2.1.2 Agricultural Leases

200 acres leased for hay.

2.2 Vegetation Management

<u>Acres Burned</u>	<u>Acres Mowed</u>	<u>Acres Sprayed</u>
50	250	5 (kudzu)

- 2.3 Forest Management---Coordinate with T.D.F. on prescriptions.

3. Property Development and Maintenance

3.1 Access Management

3.1.1 Maintenance & Improvements

15 mile gravel road

3.1.2 Construction---None

3.2 Buildings and Grounds

3.2.1 Maintenance

<u>Type</u>	<u>Cost</u>
Residence	From SMAR + \$150.00 (bathroom)
Shop	From SMAR
Checking Station	From SMAR
Grounds	From SMAR

3.3 Boundaries

Posted 20 miles of boundary by boat (100 signs)

3.4 Equipment

3.4.1 Maintenance Cost

Fertilizer Dist.	\$ 300.00
JD Mower	\$6,900.00

3.4.2 Purchase of equipment

Lawn mower	\$6,900
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4. Data Collection

4.1

<u>Checking Station</u>	<u>Man Days</u>
Deer (19 days)	57
Turkey (12 days)	24
Raccoon (12 days)	12

4.2 Habitat Surveys

Two mandays

4.3 Brood Surveys

Two mandays

4.4 Raccoon

Six mandays

5. Administration and Coordination

All necessary planning and coordination was performed that was needed to insure the proper management of the area.

6. Education

6.1	<u>Wildlife Manager II</u>	<u>Equipment Operator</u>	<u>Wildlife Technician I</u>
Law Enforcement	7	7	0
Manager IS	3	3	3
Burn Workshop	4	0	0

7. Information

Answered hundreds of phone calls concerning area management, law enforcement and TWRA operations. No specific time, since most occur outside of scheduled work hours.

8. Restoration

Hundreds of hours on turkey trapping. No captures due to large supply of natural food.

9. Manpower

<u>Project Number</u>	<u>Name of Project/Activity</u>	<u>Mandays Spent</u>
4420	Enforcement	40*
	Data Collection	60*
	Admin. & Coord.	110*
	Habitat Development	222*
	Property Management/Dev.	70*
	Restoration	140*
	Education	10*
	Information	30*

*estimated except for totals

10. Hunting Summary

<u>Deer</u>	<u>Days</u>	<u>Hunter Quota</u>	<u>Partic.</u>	<u>Harvest</u>
AR BO	3	0	1600	33
AR ES	6	4500	3150	204
Juv. BO	2	0	150	10
Gun BO	4	1500	1400	158
MUZ BO	2	500	450	65
Gun/Ar/M ES	2	500	450	152
<u>Turkey</u>	12	400	222	22

10.2 Small game

Opens same as statewide. No estimation of hunter numbers or harvest except raccoon hunts.

Raccoon	12	142
(6 kill - 6 no kill)		

11. Expenditures

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
4420		
01	\$ 73,558	\$ 70,689
02	17,994	17,715
03	17,776	5,060
05	2,800	3,271
06	575	809
07	0	802
08	0	128
09	18,342	16,883
10	0	75
11	6,600	5,571
16	<u>6,100</u>	<u>0</u>
Total	\$143,745	\$121,004

12. Does not apply.

13. Issued 21 court citations and followed through with court prosecution. Pulled 1,000 illegal marijuana plants. Four days of boating safety for Manager II and Equipment Operator.

SOUTH CHEROKEE WMA

1. INTRODUCTION

1.1. Description of Area

The Tellico and Tapoco Units are part of the Cherokee National Forest, Tapoco Inc., Bowater Inc., located in the Appalachian Mountains of southeastern Tennessee in the Knaka Range of the Blue Ridge Province. Approximately, 166,271 acres are in Region IV and 20,680 acres in Region III administration units

<u>County</u>	<u>Acres</u>	<u>Inholdings</u>
Tellico Unit		
Monroe	156,420	
Polk	20,680	
Tapoco Unit		
Blount	9,851	

1.2 Staffing

Administrative support is provided by the Region IV office and various central office division.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II	1	0
Wildlife Manager II	2	0

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Wildlife Manager II	1	WMA Supervisor
Wildlife Officer	4	Monroe & Blount Co.
Wildlife Officer II	1	Area 42
Wildlife Enf. Sup.	1	Area 42
Biologist II	1	Regional
Biologist III	4	Statewide

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

All agricultural operations are handled by the Cherokee National Forest, Tapoco Inc., and Bowaters Inc.

2.2. Vegetation Management

All vegetation management operations are handled by the Cherokee National Forest, Tapoco Inc., and Bowater Inc. TWRA assisted in the heliseeding of 444 acres of clearcut and burned timber prescriptions on the Tellico District of CNF. The seeding consisted of 1150 lbs. of White Clover, 1600 lbs. of Annual Ryegrass, 1600 lbs. of Timothy, 1650 lbs. of Orchardgrass and 409 bushels (22,495 lbs.) of Winter Wheat. This seeding gives the

Tellico Unit an additional 444 acres of wildlife food plots given the average wildlife usage of 3 years, this annual program should significantly affect the wildlife on Tellico.

2.2.1. Linear Opening Management

All linear opening management operations are handled by the CNF, Tapoco Inc. and Bowaters Inc.

2.3. Forest Management

All forest management operations are handled by the CNF, Tapoco, Inc. and Bowaters Inc.

2.4. Water Level Management---None.

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

All access management operations are handled by CNF, Tapoco Inc. and Bowaters.

3.2. Buildings and Grounds---None.

3.3. Boundaries

<u>Estimates Boundary</u>	<u>Miles Established and Cost</u>	<u>Miles Maintained and Cost</u>
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135.0	5.6 miles at \$650.00	
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3.4 Equipment---None.

3.5 Water Control System---None.

4. DATA COLLECTION

The management objective of the data collection operation is to monitor population trends of deer, bear, boar and turkey.

Deer: Problem III Strategy 3
Problem IV Strategy 2

Bear: Problem II Strategy 1, 2
IV Strategy 1, 2, 3
V Strategy 3, 4
VI Strategy 1
VII Strategy 1
VIII Strategy 1, 2

Boar: Problem I Strategy 1, 2, 3, 4
Problem IV Strategy 1, 2

Turkey: Problem II Strategy 2
Problem III Strategy 1, 2, 3
Problem IX Strategy 1

4.1. Checking Station

<u>Species</u>	<u>Mandays</u>
Deer	44
Bear	35
Boar	25
Turkey	0

4.2. Habitat Surveys

<u>Type</u>	<u>Mandays</u>
Mast Survey	6
Browse Survey	14

4.3. Population Surveys

<u>Type</u>	<u>Mandays</u>
Bear Index	40
Boar Index	22
Turkey Brood Survey	12

5. ADMINISTRATION AND COORDINATION

Coordinated management activities between TWRA and the Cherokee National Forest, (Tellico and Hiwassee Ranger Districts), Tapoco Inc., and Bowaters Inc. Worked to provide maximum wildlife benefits on Cherokee timber prescriptions, wildlife openings and cost share programs.

Coordinated management activities with Tapoco Inc., and Bowater Inc. on boundary posting and wildlife openings.

6. EDUCATION

6.1 Professional Development

Law enforcement training	7 days
Area managers training	3 days
Prescribed burning training	5 days

6.2. Hunter Education---None

6.3 CENTS Educataion---None

7. INFORMATION

Answered questions concerning hunting seasons, bag limits, where to hunt, and questions on management of wildlife populations.

Presented the National Wildlife Week Program to 350 students and to Vonore PTO.

Participated as a panelist at the annual Cherokee National Forest public meeting in Knoxville.

Interviewed by Channel Six TV on illegal bear hunting and the welfare of abandoned bear cubs.

Interviewed by Morgan Simmons of the Knoxville News Sentinel on the Black Bear Transects on Tellico.

8. RESTORATION

Turkey trapping was unsuccessful due to the abundance of other foods and mild winter weather. We were able to trap and relocate 12 birds from Blount County near the Tapoco Unit boundary.

-80 mandays was spent on Turkey Restoration.

-34 European Wild Hogs were relocated to the Tellico Unit.

-6 Black Bears were relocated to the Tellico and Ocoee Units.

9. MANPOWER

<u>Project Number</u>	<u>Project or Activity</u>	<u>Mandays Budgeted</u>	<u>Mandays Spent*</u>
4440	Enforcement		20
	Data Collection		171
	Admin. & Coordination		25
	Habitat Development		5
	Property Maintenance & Dev.		150
TOTAL			371

*Includes all personnel, even those not budgeted.

10. HUNTING SUMMARY

The management objective of the hunting program is to allow as much hunter opportunity the land and wildlife can withstand, without damaging the resource.

Deer: Problem II Strategy 5
Problem III Strategy 2

Bear: Problem I Strategy 1-6
Problem II Strategy 2,3
Problem IV Strategy 2,3
Problem V Strategy 1,3,4

Bear: Problem VI Strategy 1
Problem VII Strategy 1
Problem VIII Strategy 1, 2

Boar: Problem I Strategy 1-4

Turkey: Problem III Strategy 1,2
Problem IV Strategy 1

Grouse Problem I Strategy 1,2
Problem III Strategy 1-3

Squirrel: Problem I Strategy 1, 2
Raccoon: Problem IV Strategy 1-4

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quote</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer (A)ES	16	N/Q	500	24
Deer (A,M)BO	3	N/Q	225	37
Deer(A,M,G)BO	9	N/Q	1125	153
Deer (YS)ES	2	N/Q	110	3
Deer (Party)BO	2	400	400	1
Boar (A)ES	16	N/Q	500	4
Boar (A-M)ES	3	N/Q	225	1
Boar (Dog)ES	10	N/Q	450	5
Boar (A-M-G)ES	9	N/Q	1125	36
Boar (YS)ES	2	N/Q	110	3
Boar(Dog)ES	14	N/Q	1145	16
Boar (Party)ES	2	400	350	10
Boar (Party)ES	2	400	400	9
Boar (Party)ES	2	400	250	3
Boar (Party)ES	2	400	125	12
Bear(Dog)ES	5	N/Q	450	19
Bear(Dog)ES	14	N/Q	1145	36
Bear (Party)ES	2	400	350	2
Turkey(G)M	38	N/Q		78

10.2. Small AGame

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Statewide Season Length (days)</u>	<u>Estimated Total Hunters</u>
Grouse	117	139	150
Squirrel	89	160	250
Raccoon	42	49	600
Trapping			
Raccoon	15	0	10
Trapping	53	92	10

11. EXPENDITURES

<u>Project Number</u>	<u>Budgeted Amount</u>	<u>Actual Expenditures</u>
4440		
01	37,440.00	41,211.92
02	8,663.00	9,552.14
03	13,629.00	6,360.75
05	700.00	1,851.73
06	0.00	658.68
07	0.00	13.50
08	0.00	40.92
09	4,700.00	3,886.30
10	300.00	300.00
11	0.00	674.85

Total \$65,432.00 \$64,550.79

12. LAND ACQUISITION/LEASES---None

13. GENERAL COMMENTS AND DISCUSSION

In summary, the purpose of this project is to conduct management activities on Cherokee WMA, Tellico and Tapoco Units, insuring many quality hunting opportunities for big game, small game and furbearer sportsman.

14. OFFICIALS

David Whitehead, Wildlife Manager II	Robert Ripley, Region IV Manager
P. O. Box 248	6032 West Andrew Johnson Highway
Vonore, TN. 37885	Talbott, TN. 37877
(615) 884-6767	1-800-332-0900

Bob Nichols, Wildlife Manager III	Gary T. Myers, Executive Director
6032 West Andrew Johnson Highway	TWRA
Talbott, TN 37877	P. O. Box 40747
1-800-332-0900	Nashville, TN 37204
	(615) 781-6552

TELLICO LAKE WMA OPERATION AND MAINTENANCE

1. INTRODUCTION

1.1. Description of Area

Tellico Lake WMA is located in the foothills of the Appalachian Mountains of southeastern Tennessee, on Tellico Reservoir, in Monroe and Blount Counties. Tellico Lake WMA lies between Little Tennessee River mile 23.5 and 32.2 and the peninsula of Fort Loudon State Historic Area at LTRM 21.0. It is within the Region IV administration unit.

<u>County</u>	<u>Acres</u>	<u>Inholdings</u>
Monroe	5,573	0
Blount	350	0

1.2. Staffing

Administrative support is provided by the Region IV office and various central office division.

1.2.1. Management Area Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Number of Part Time</u>
Wildlife Manager II		0
Wildlife Technician II	2	0

1.2.2. Region/Division Support Staff

<u>Title</u>	<u>Number of Full Time</u>	<u>Responsibility</u>
Wildlife Manager II	1	WMA Supervisor
Wildlife Officer	4	Monroe & Blount Co.
Wildlife Officer II	1	Area 42
Wildlife Enf. Sup.	1	Area 42
Biologist II	1	Regional
Biologist III	4	Statewide

2. HABITAT DEVELOPMENT

2.1. Agricultural Operation

The management objective of the agricultural operation is to provide as much food and cover as possible for ducks, quail and rabbits.

Ducks: Problem I, Strategy 3,4, Problem VI Strategy 2,3, Problem VII Strategy 1,2.

Quail: Problem II Strategy 2.

Rabbit: Problem II, Strategy 1,2.

2.1.1 Force Account

<u>Crop</u> <u>Income</u>	<u>Primary Species</u> <u>Planted for</u>	<u>Acres</u> <u>Harvested</u>	<u>Acres</u> <u>Remaining</u>	<u>Total</u> <u>Acres</u>
Wheat	Dove		10	
Bicolor	Quail		1	
Millet	Ducks		15	
Annual Mix	Rabbit & Quail		5	
Adppalow Lesp.	Quail		3	
Milo	Quail		3	
Partridge Pea	Quail		1	
Korean Lesp.	Rabbit & Quail		4	
TOTAL			42	

2.1.2. Agricultural Leases

<u>Crop</u> <u>Income</u>	<u>Primary Species</u> <u>Planted for</u>	<u>Acres</u> <u>Harvested</u>	<u>Acres</u> <u>Remaining</u>	<u>Total</u> <u>Acres</u>
Corn	Ducks	100	2	100
Soybeans	Ducks	40	4	40
Milo	Ducks	0	40	40
Corn	Quail & Rabbit	11	0	11
Soybeans	Quail & Rabbit	30	0	30
Wheat	Quail & Rabbit	18	0	18
Totals		200	46	240

2.2. Vegetation Management

The management objective of the vegetation management operation is to provide quail and rabbits with as much vegetation diversity as possible and to provide a quality field trial area. Quail Problem II, Strategy 2; Rabbit Problem II, Strategy 1,2.

<u>Primary</u> <u>Species</u>	<u>Acres</u> <u>Burned</u>	<u>Acres</u> <u>Mowed</u>	<u>Acres</u> <u>Disked</u>
Quail & Rabbit	10	5	
TOTAL	10	5	

2.2.1. Linear Opening Managaement---None

2.3 Forest Management

There is no forest management program, TVA and Bowater oversee all forestry activities on Tellico Lake WMA.

2.4. Water Level Management

The management objective of the water level management operation is to floor 100 acres in three stages, from October 14, to February 14, so as to maintain a continuous supply of food for waterfowl feeding.

2.4.1. Flooding

<u>Type of Vegetation Flooded</u>	<u>Acres Flooded</u>
Soybean	10
Corn	2
Milo	40
Millet	15
Moist Soil	20
GTR	5
Total	92

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1. Access Management

The management objective of the access management operation is to provide the best possible access to the WMA without hurting the resource.

3.1.1. Maintenance

<u>Bridges (type)</u>	<u>Road (type)</u>	<u>Miles</u>	<u>Cost</u>
None	Gravel	4	* 973.35*

*The only cost incurred was the gravel; Monroe County DOT hauled all the gravel.

3.1.2. Construction---None

3.2. Buildings and Grounds---None

3.3. Boundaries

No cost incurred this budget year.

3.4 Equipment

3.4.1. Maintenance Cost

The cost of equipment maintenance and operation totals
\$2,986.71

3.4.2. Purchase of Equipment

New 90 HP John Deere Tractor	\$28,190.07
New 6 ft. Sidewinder Rotary Cutter	2,241.00
New 25 ft. Gooseneck Trailer	3,595.00
Total	\$34,026.07

3.5. Water Control System

3.5.1. Levees---No cost incurred this budget year.

3.5.2. Control Structures---No cost this budget year.

4. DATA COLLECTION

The management objective of the data collection operation is to develop accurate counts of wintering waterfowl. Duck Problem IV, Strategy 2, 3.

4.1. Checking Station

<u>Species</u>	<u>Mandays</u>
Deer	6

4.2. Habitat Surveys---None.

4.3. Population Surveys

<u>Type</u>	<u>Mandays</u>
Neck-collared Goose Survey	7
Wood Duck Box Survey	1

5. ADMINISTRATION AND COORDINATION

Work was done to improve the projects objective and budget. Coordinated management activities between TWRA and TVA, TRDA, Department of Conservation and Bowaters, Inc. Coordinated field trails 3 quail clubs, 1 retriever club and 1 fox hound club.

6. EDUCATION

6.1. Professional Development

Law enforcement training, 7 days
Area managers training, 3 days.
Prescribed burning training, 5 days

6.2. Hunter Education---None.

6.3. CENTS Education---None.

7. INFORMATION

Answered questions concerning hunting seasons, bag limits, where to hunt, and questions on management of wildlife populations.

Presented the National Wildlife Week Program to 350 students and to Vonore PTO.

Interviewed by the Heartland TV series about the Chota Waterfowl Refuge and waterfowl populations.

8. RESTORATION---None.

9. MANPOWER

<u>Project or Activity</u>	<u>Name of Project</u>	<u>Mandays Spent*</u>
4450	Enforcement	20
	Data Collection	8
	Admin. & Coordination	50
	Habitat Development	250
	Property Maintenance & Dev.	13
	Education	15
	Information	3
	TOTAL	359

*Includes all personnel, even those not budgeted.

10. HUNTING SUMMARY

The management objective of the hunting program is to allow Young Sportsman and waterfowl hunters an opportunity to hunt.

10.1. Big Game

<u>Type Hunt</u>	<u>Number of Days</u>	<u>Hunter Quota</u>	<u>Hunter Participation</u>	<u>Harvest</u>
Deer (A)	23	N/Q		
Deer (A,M)	9	N/Q		
Deer (A,M,G)	12	N/Q		
Deer (shotgun)	2	20		7
Deer (shotgun)	2	20		3
Turkey	38	N/Q		
TOTAL	.101			

10.2. Small Game

Type Hunt	Number of Days	Statewide Season Length (days)	Estimated Total Hunters
Rabbit	31	113	40
Squirrel	36	161	10
Quail	14	113	10
Ducks	30	30	25
Geese	55	55	25

11. EXPENDITURES

Project Number	Budgeted Amount	Actual Expenditures
4450		
01	39,062.00	39,807.13
02	9,061.00	9,779.50
03	13,372.00	6,863.58
05	1,800.00	1,229.47
06	600.00	693.25
07	0.00	556.12
08	0	104.20
09	4,690.00	6,576.60
11	4,025.00	2,269.51
16	30,250.00	34,738.07
Total	102,860.00	102,617.43

12. LAND ACQUISITION/LEASES---None.

13. GENERAL COMMENTS AND DISCUSSION

In summary the purpose of this project is to conduct management activities on Tellico Lake WMA; McGhee Carson Unit, Chota Refuge Unit and Citico Unit. These areas provide a quality habitat for the running of quail, rabbit and retriever field trials and a place where Young Sportsman can hunt and enjoy their hunting experience, and a quality habitat for wintering waterfowl.

14. OFFICIALS

David Whitehead, Wildlife Manager II	Robert Ripley, Region IV Manager
P. O. Box 248	6032 West Andrew Johnson Highway
Vonore, TN. 37885	Talbot, TN. 37877
(615) 884-6767	1-800-332-0900

Bob Nichols, Wildlife Manager III	Gary T. Myers, Executive Director
6032 West Andrew Johnson Highway	TWRA
Talbot, TN. 37877	P. O. Box 40747
1-800-332-0900	Nashville, TN 37204
	(615) 781-6552

MISCELLANEOUS WMA'S--REGION IV

1. INTRODUCTION

- 1.1 Region IV miscellaneous Wildlife Management Areas are located in Upper East Tennessee. They are within the Region IV administrative unit. Most areas are bordered by a river or lake.

<u>WMA</u>	<u>COUNTY</u>	<u>ACRES</u>
Buffalo Springs	Grainger	350
Bumpus Cove	Unicoi/Washington	4,000
Cove Creek	Campbell	2,500
Eastern State	Knoxville	350
Henderson Island	Jefferson	300
John Sevier	Hawkins	300
Jackson Island	Washington	100
Rankin	Cocke	1,600
Nolichucky	Greene	1,000
Chilhowie Mtn.	Blount/Sevier	1,000
Cove Mountain	Sevier	970
Doe Mountain	Johnson	7,300

1.2 Management Area Staff

<u>TITLE</u>	<u>NUMBER OF FULL TIME</u>	<u>NUMBER OF PART TIME</u>
Manager I	1	0
Technician I	1	0

2. HABITAT DEVELOPMENT

2.1 Agricultural Operation

Management objectives are to maximize agricultural outputs and control undesirable vegetation to maintain and enhance wildlife populations.

2.1.1 FORCE ACCOUNT

<u>CROP</u>	<u>PRIMARY SPECIES PLANTED FOR</u>	<u>ACRES HARVESTED</u>	<u>ACRES REMAINING</u>	<u>TOTAL ACRES</u>	<u>INCOME</u>
MILLET/ SOYBEANS	DOVES	40		40	
WHEAT	DOVES	40		40	
CORN	DUCKS/DOVE			10	
GRASS/ CLOVER	DEER/TURKEY			90	
MILO	QUAIL/RABBITS/ DUCKS		15	15	
ANNUAL VARIETY SEED MIX			10	10	
				=====	
				205	

2.1.2 AGRICULTURAL LEASES

<u>CROP</u>	<u>PRIMARY SPECIES PLANTED FOR</u>	<u>ACRES HARVESTED</u>	<u>ACRES REMAINING</u>	<u>TOTAL ACRES</u>
CORN	DOVES/DEER/DUCKS	20	5	25
HAY	DEER/TURKEY	41	49*	90
		61	54	115

*BUSHHOGGED

2.2 VEGETATION MANAGEMENT

To control shrub and weed vegetation to provide diversity of plant species and create edge effect.

<u>PRIMARY SPECIES</u>	<u>ACRES BURNED</u>	<u>ACRES MOWED</u>	<u>ACRES DISKED</u>
Quail	45		
Turkey / Deer		59	

2.3 FOREST MANAGEMENT

Forest Management objectives for Cove Creek are to diversify forest types to provide wildlife a renewed supply of food and cover.

<u>ACRES UNDER MANAGEMENT</u>	<u>ACRES CLEARCUT</u>	<u>ACRES OTHER SILVICULTURAL PRACTICES</u>	<u>ACRES PLANTED BY SPECIES</u>	<u>TIMBER SALES REVENUE</u>
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900*

*Roads are marked for cuts and are scheduled to be constructed soon.

2.4 WATER LEVEL MANAGEMENT

To enhance waterfowl use and populations in East Tennessee by providing a place for resting and feeding.

2.4.1 FLOODING

<u>TYPE OF VEGETATION FLOODED</u>	<u>ACRES FLOODED</u>
Corn	4
Milo	3
Moist Soil	6

3. PROPERTY DEVELOPMENT AND MAINTENANCE

3.1 Access Management

3.1.1 Maintenance - Maintained 14 gates
on 5 areas.

3.1.2 Construction - No new gates erected

3.2 Buildings & Grounds

3.2.1 Maintenance - Maintained 2 residences

3.2.2 Construction - None

3.3 Boundaries - No work done.

3.4 Equipment

3.4.1 Maintained 3 tractors, 1 dozer and
various pieces of machinery.

3.4.2 No new equipment purchased.

3.5 Water Control System

3.5.1 Constructed 1,700 feet of levee on
Henderson Island.

3.5.2 Constructed 1 water control structure
on Henderson Island.

4. DATA COLLECTION

4.1 Checking Station Operation (by species)

<u>SPECIES</u>	<u>MAN DAYS</u>
Deer	8
Turkey	4
Raccoon	1

5. ADMINISTRATION & COORDINATION

Work was done to ensure that activities covered under this project were performed as effectively and efficiently as possible.

6. EDUCATION

6.1 Law enforcement training, area managers annual meeting, controlled burns workshop.

6.2 Hunter Education - Archery, Hunter Ethics 1-16-91

7. INFORMATION

Answered questions from the public throughout the year on population and management of the areas.

8. RESTORATION

Turkey trapped in Grainger County - relocated 7 birds to Anderson County.

9. MANPOWER

<u>PROJECT NUMBER</u>	<u>NAME OF PROJECT OF ACTIVITY</u>	<u>MAN DAYS SPENT</u>
4430	Enforcement	20
	Data Collection	20
	Administration and Coordination	100
	Habitat Development	182
	Property Maintenance and Development	35
	Restoration	25
	Education	1
	Information	10
		393

10. HUNTING SUMMARY - The areas are managed to provide the maximum bunter opportunities while ensuring sound management of the resource.

10.1 Due to the high number of areas and the varying hunting opportunity on each area, no estimate of hunting days is possible.

11. EXPENDITURES

<u>PROJECT #</u>	<u>BUDGETED AMOUNT</u>	<u>ACTUAL EXPENSES</u>
4430		
01	39,454	46,008
02	9,731	11,647
03	17,237	6,681
05	2,600	1,638
06	397	276
07	-0-	-0-
08	-0-	-0-
09	10,679	9,795
10	-0-	1
11	4,500	4,122
14	-0-	10
16	<u>800</u>	<u>595</u>
	85,398	93,798

12. The following is a list of land that should be added to the WMA for proper wildlife management:

<u>LAND OWNER</u>	<u>ACRES NEEDED</u>	<u>COUNTY</u>	<u>LOCATION</u>
Mrs. Jones	120	Campbell	North of Cove Creek
Lucky Star Marina	1,000	Washington/ Unicoi	In center of Bumpas Cove

13. This project is required to properly manage the 11 WMAs noted earlier in this document.

PHIPPS BEND REFUGE

PROJECT STATUS REPORT:

The objective of this project is to coordinate and manage the man-made wetlands at Phipps Bend Industrial Park in Hawkins County. Amount spent was in line with budgeted amount. No manpower was budgeted.

Amount budgeted: \$1,200

Spent: \$1,285.24

LIST OF ACCOMPLISHMENTS:

1. Coordinated activities and planning with Phipps Bend Joint Venture to continue the cooperative agreement.
2. Prepared season and proclamation changes.
3. Conducted one archery and one muzzleloader hunt for deer.
4. Maintained and/or constructed gate structures.
5. Placed and maintained 76 wood duck box structures in cooperation with the University of Tennessee.
6. Reconstructed approximately one mile of levee road.
7. Over 400,000 duck and goose use days occurred on the area.
8. A southeast regional retriever field trial was conducted with participants from over 15 states.